



The Commonwealth of Massachusetts

FOURTEENTH ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS

YEAR ENDING NOVEMBER 30, 1933

*To the Honorable Senate and House of Representatives of the
Commonwealth of Massachusetts*

In accordance with the provisions of law, I have the honor, as Commissioner of Public Works, to submit the fourteenth annual report of the Department of Public Works for the year ending November 30, 1933.

The organization of the Department, as defined in Chapter 16, General Laws, as amended by chapter 297, Acts of 1927, was as follows:—

Commissioner of Public Works, FRANK E. LYMAN.

Associate Commissioner, RICHARD K. HALE.

Associate Commissioner, HERMAN A. MACDONALD.

Office Building. The new office building for this Department is intended to accommodate the various offices of the Department which are located in Boston. Any space not immediately needed for its activities is to be assigned for other State departments at reasonable rental figures. This building was authorized by Chapter 122, Acts of 1931, with additional appropriations for completion, namely,—Chapter 21, Acts of 1932 and Item 578b, Chapter 371, Acts of 1933.

The contract plans were prepared during the latter part of 1931 by the Architect, Edward T. P. Graham, of Boston, working in close cooperation with the Department to plan a layout of offices particularly adapted to the Department's functions, providing adequate working spaces and conditions for more efficient administrative conditions than had for many years been possible with the crowded condition at the State House and at Commonwealth Pier 5.

The main contract, for the erection of the building was awarded to F. V. Warren Co., of Philadelphia, Penn., and this was completed on July 15, 1933.

The Department moved its offices from the State House and its engineering offices from Commonwealth Pier 5, from May 4 to 8, 1933. The Registry of Motor Vehicles moved from Commonwealth Pier to the new building from July 1 to 5, 1933.

A number of outstanding projects were completed or begun during the year as follows: work on the new route 3-A, by-passing the thickly settled parts of Cohasset and Scituate; a new highway constructed from Taunton to Middleborough; a by-pass of Hyannis; a new highway from Dedham to Providence; and the Worcester Turnpike completed easterly through Wellesley and Newton. Work was started on new projects as follows: The portion of the Worcester Turnpike route which lies in Brookline; the new highway from Cambridge to Concord; and the work on the North Shore Radial highway connecting East Boston Traffic Tunnel with the main routes leading to the north.

The mileage of new State highways laid out during the year amounted to 28.41 miles, but there were abandoned or discontinued 13.48 miles of State highways, so that the net mileage of State highways amounted to 1824.05 miles at the end of the year.

The Department has constructed, reconstructed and widened 89.75 miles of State highways and built 163.22 miles of roads in cooperation with cities, towns and counties under the provisions of chapter 90, General Laws, and in addition has constructed 2.34 miles of highways under the

provisions of Special Acts. Under the provisions of section 26, Chapter 81, General Laws, the Department has had charge of the repair and maintenance of 9058 miles of public ways, exclusive of State highways in 179 towns.

The engineering and clerical staff of the Department was as follows:—

Chief Engineer, ARTHUR W. DEAN.

Highway Engineer (Projects), FRANKLIN C. PILLSBURY.

Highway Engineer (Construction), RAYMOND W. COBURN.

Highway Engineer (Maintenance), GEORGE H. DELANO.

Bridge Engineer, GEORGE E. HARKNESS.

District Highway Engineers:—

District No. 1, GEORGE A. CURTIS, — Berkshire County and the towns of Worthington, Middlefield and Huntington in Hampshire County, and the towns of Chester, Montgomery, Russell, Blandford and Tolland in Hampden County.

District No. 2 H. D. PHILLIPS, — Franklin, Hampshire and Hampden Counties, with the following exceptions: three towns in Hampshire County included in District No. 1 and ten towns in Hampden County included in Districts Nos. 1 and 3.

District No. 3, JOHN A. JOHNSTON, — Worcester County and the towns of Brimfield, Holland, Monson, Palmer and Wales in Hampden County.

District No. 4, F. D. SABIN, — Middlesex County.

District No. 5, JAMES E. LAWRENCE, — Essex and Suffolk Counties.

District No. 6, H. O. PARKER, — Norfolk and Bristol Counties.

District No. 7, H. C. HOLDEN, — Plymouth, Barnstable, Dukes and Nantucket Counties.

District Waterways Engineer, for Boston Harbor, — JOHN N. FERGUSON.

District Waterways Engineer, for harbors and waterways outside Boston Harbor, — FRANCIS L. SELLEW.

Secretary, MARY A. RILEY.

Financial Secretary, FRED FAIR.

Registry of Motor Vehicles

Registrar, MORGAN T. RYAN.

Deputy Registrar, ANTHONY A. BONZAGNI.

Assistant to the Registrar of Motor Vehicles, ALFRED W. DEVINE.

Chief Administrative Clerk, CHARLES R. GILLEY.

Chief Inspector of Motor Vehicles, ALBERT S. OLSSON.

A detailed report of the activities of the Department for the year is presented herewith.

FRANK E. LYMAN,

December 1, 1933.

Commissioner of Public Works.

SPECIAL REPORTS TO THE LEGISLATURE

The Department was authorized and directed by the Legislature to make certain investigations, and the reports thereon were made as follows:—

Advisability of further dredging Lynn Harbor and Saugus River and of widening draws in bridges over said river. Report made Dec. 5, 1932, by the Department of Public Works, under chapter 27, Resolves of 1932. (H. 2 of 1933).

Traffic conditions on Fall River and New Bedford highway at Westport Factory. Report made Dec. 2, 1932, by the Department of Public Works, under chapter 25, Resolves of 1932. (H. 3 of 1933).

Abolition of the grade crossing at Lincoln Square in Worcester. Joint report made Dec. 2, 1932, by the Department of Public Works and the

Department of Public Utilities, under chapter 37, Resolves of 1932. (H. 153 of 1933).

Public access to Lake George or Wales Pond in the town of Wales. Report made Dec. 20, 1932, by the Department of Public Works and the Attorney General, jointly, under chapter 453, Acts of 1923. (H. 179 of 1933).

Construction of a new high level bridge over the Weymouth Fore River between the city of Quincy and the town of Weymouth. Report made Dec. 2, 1932, by the Department of Public Works, under chapter 32, Resolves of 1932. (S. 4 of 1933).

Plans for the construction of a comfort station and the laying out of a parking area for motor vehicles near the entrance to the Wachusett Dam in the town of Clinton. Joint report made Dec. 7, 1932, by the Metropolitan District Commission and the Department of Public Works, under chapter 33, Resolves of 1932. (S. 6 of 1933).

Advisability of providing for scientific surveys of the natural resources of the Commonwealth. Report made Dec. 6, 1932, by the Department of Public Works, under chapter 138, Acts of 1932. (S. 8 of 1933).

RECOMMENDATIONS FOR LEGISLATION

The Commissioner of Public Works presented to the State Secretary on Dec. 4, 1933, as required by law that part of the current annual report which contains recommendations or suggestions for legislative action as follows:—

1. The Department recommends legislation to correct bearings of certain harbor lines on the southerly side of Charles River at the Charlestown Bridge in the city of Boston, given in section one, chapter two hundred and thirty-nine, Acts of nineteen hundred and thirty.

2. A portion of the United States Pierhead and Bulkhead line on the easterly side of New Bedford Harbor has been revised by the War Department. Inasmuch as the State harbor line elsewhere coincides with the United States lines, the Department recommends legislation to make the slight changes necessary for the State harbor line to conform to the Federal harbor lines.

3. At the present time the Department of Public Works has limited authority only in regard to the regulation of speed of vehicles on highways. For some time it has been felt that no adequate or satisfactory solution of the problem of speed control has been discovered. The Department asks authority to experiment on various rules and devices on certain highways to determine whether or not a satisfactory solution of the speed problem can be reached by carrying out at the same time both scientific studies and practical tests of various ideas. It also requests authority for a limited period to establish from time to time such rules and regulations as may be necessary to carry out these plans.

APPROPRIATIONS

Chapter 89, Acts of 1933, making appropriations for the employment of additional persons as a measure of relief during the present unemployment emergency, is, in part, as follows:—

Service of the Department of Public Works

Item

C. For removing abandoned hulks or wrecks lying along the waterfront of Boston Harbor, a sum not exceeding fifty thousand dollars . . . \$50,000 00

Chapter 174, Acts of 1933, making appropriations for the maintenance of departments, boards, commissions, institutions and certain activities of the Commonwealth etc., is, in part, as follows:—

Item

Requirements for Extinguishing the State Debt

209. For sinking fund requirements and for certain serial bonds maturing during the present year, the sum of one million six hundred seventy-one thousand three hundred ninety-nine dollars and fifty cents, payable from the following accounts and funds in the following amounts:— from the surplus of sinking fund revenue, four hundred twenty thousand dollars; from the Highway Fund, two hundred four thousand six hundred forty-nine dollars and fifty cents; and the remainder from the General Fund \$1,671,399 50
- 209a. To meet one-fourth of the expenditures authorized by sections one and two of chapter one hundred and twenty-two of the acts of nineteen hundred and thirty-one, and already in the main incurred, which is the proportionate part intended to be ultimately met by the Commonwealth during the current fiscal year, thereby reducing by the sum hereby appropriated the amount that may be borrowed under section three of said chapter, without otherwise affecting the authority to borrow under said section three the remainder of the amount authorized to be borrowed thereunder, the sum of two million one hundred and twenty-five thousand dollars, the same to be paid from the Highway Fund 2,125,000 00

Interest on the Public Debt

210. For the payment of interest on the direct debt of the commonwealth, a sum not exceeding eight hundred sixty-nine thousand dollars, of which sum two hundred thirty-nine thousand dollars shall be paid from the Highway Fund 869,000 00

Service of the Department of Banking and Insurance

Division of Insurance:

298. For other personal services of the division, including expenses of the board of appeal and certain other costs of supervising motor vehicle liability insurance, a sum not exceeding one hundred eighty-two thousand one hundred and eighty dollars, of which sum not more than thirty-five thousand dollars may be charged to the Highway Fund 182,180 00

Service of the Department of Corporations and Taxation

Corporation and Taxation Division:

305. For the salaries of certain positions filled by the commissioner, with the approval of the governor and council, and for additional clerical and other assistance, a sum not exceeding two hundred twenty thousand and sixty dollars, of which sum not more than fifty thousand dollars may be charged to the Highway Fund to cover the estimated cost of collection of the gasoline tax, so called 220,060 00

Service of the Department of Public Safety
Division of State Police:

550.	For the salaries of officers, including detectives, a sum not exceeding four hundred seven thousand six hundred dollars, of which sum not more than one hundred and forty thousand dollars may be charged to the Highway Fund	407,600 00
552.	For other necessary expenses of the uniformed division, including traveling expenses of detectives, a sum not exceeding three hundred fifty thousand dollars, of which sum not more than one hundred fifty-six thousand nine hundred dollars may be charged to the Highway Fund	350,000 00

Service of the Department of Public Works

The appropriations made in the following three items are to be paid two thirds from the Highway Fund and one third from the Port of Boston receipts:

570.	For the salaries of the commissioner and the associate commissioners, a sum not exceeding eighteen thousand four hundred and sixty dollars	18,460 00
571.	For personal services of clerks and assistants to the commissioner, a sum not exceeding eighty-seven hundred and fifty dollars	8,750 00
572.	For traveling expenses of the commissioners, a sum not exceeding seventeen hundred and forty dollars	1,740 00
Total		<hr/> \$28,950 00

Functions of the department relating to highways (the following appropriations, except as otherwise provided, are made from the Highway Fund):

573.	For the personal services of the chief engineer, engineers and office assistants, including certain clerks and stenographers, a sum not exceeding eighty-nine thousand three hundred and twenty dollars	89,320 00
574.	For services other than personal, including printing pamphlet of laws and the annual report, and necessary office supplies and equipment, a sum not exceeding ten thousand three hundred dollars	10,300 00
575.	For the suppression of gypsy and brown tail moths on state highways, a sum not exceeding twelve thousand dollars	12,000 00
576.	For the construction and repair of town and county ways, a sum not exceeding two million six hundred thousand dollars	2,600,000 00
577.	For aiding towns in the repair and improvement of public ways, a sum not exceeding nine hundred ninety thousand dollars	990,000 00
578.	For the maintenance and repair of state highways, including care of snow on highways, expenses of traffic signs and lights, and payment of damages caused by defects in state highways, with the approval of the attorney general; for care and repair of road-building machinery; and for the	

Item

	purchase and improvement of a nursery for road-side planting, a sum not exceeding two million seven hundred ten thousand dollars	2,710,000 00
578a.	For the maintenance and operation of the new public works building, a sum not exceeding forty thousand dollars	40,000 00
579.	For the purpose of enabling the department of public works to secure federal aid for the construction of highways, a sum not exceeding five hundred twenty-five thousand dollars, and in addition there is hereby transferred the sum of seven hundred twenty-five thousand dollars from the appropriation previously made for the elimination of grade crossings	\$525,000 00
580	For administering the law relative to advertising signs near highways, a sum not exceeding fourteen thousand seven hundred and twenty dollars, to be paid from the General Fund	14,720 00
	Registration of Motor Vehicles:	
581	For personal services, a sum not exceeding nine hundred thirty thousand two hundred dollars, of which sum ten thousand dollars may be charged to the General Fund, and the remainder shall be paid from the Highway Fund	930,200 00
582	For services other than personal, including traveling expenses, purchase of necessary supplies and materials, including cartage and storage of the same, and for work incidental to the registration and licensing of owners and operators of motor vehicles, a sum not exceeding five hundred forty-three thousand five hundred and fifty dollars, to be paid from the Highway Fund	543,550 00
583	For printing and other expenses necessary in connection with publicity for certain safety work, a sum not exceeding one thousand dollars, to be paid from the Highway Fund	1,000 00
	Specials:	
585	For certain highway improvements in the city of Revere, as authorized by chapter four hundred and forty-five of the acts of nineteen hundred and thirty-one, as amended by chapter two hundred and fifty-eight of the acts of nineteen hundred and thirty-two, a sum not exceeding five hundred and fifty thousand dollars, to be paid from the Highway Fund and to be in addition to the unexpended balance of any appropriation heretofore made for the purpose and to be in anticipation of a further appropriation in nineteen hundred and thirty-three sufficient to complete the work authorized by said chapters. The department of public works is hereby authorized to make contracts and incur expenses within the total sum of one million three hundred fifty-five thousand dollars authorized by said chapters	\$550,000 00
586	There is hereby added to the sum appropriated in nineteen hundred and thirty-two for land damages and other expenses incidental to the laying out of a state highway extending from Alewife	

Item

	Brook parkway in the city of Cambridge through said city and certain towns, including Concord, as authorized by chapter three hundred and two of the acts of nineteen hundred and thirty-two, a sum not exceeding one hundred thirty thousand dollars, to be paid from the Highway Fund	130,000 00
	Functions of the department relating to waterways and public lands:	
587	For personal services of the chief engineer and assistants, a sum not exceeding fifty thousand six hundred dollars	50,600 00
588	For services other than personal, including printing pamphlet of laws and the annual report, and for necessary office and engineering supplies and equipment, a sum not exceeding seventeen hundred dollars	1,700 00
589	For the care and maintenance of the province lands and of the lands acquired and structures erected by the Provincetown tercentenary commission, a sum not exceeding forty-seven hundred dollars	4,700 00
590	For the maintenance of structures, and for repairing damages along the coast line or river banks of the commonwealth, and for the removal of wrecks and other obstructions from tide waters and great ponds, a sum not exceeding twenty-two thousand five hundred dollars	22,500 00
591	For the improvement, development and protection of rivers and harbors, tide waters and foreshores within the commonwealth, as authorized by section eleven of chapter ninety-one of the General Laws, as appearing in the Tercentenary Edition thereof, and of great ponds, a sum not exceeding twenty-five thousand dollars, and any unexpended balance of the appropriation remaining at the end of the current fiscal year may be expended in the succeeding fiscal year for the same purposes; provided, that all expenditures made for the protection of shores shall be upon condition that at least fifty per cent of the cost is covered by contributions from municipalities or other organizations and individuals, and that in the case of dredging channels for harbor improvements at least twenty-five per cent of the cost shall be so covered; and further provided that the department of public works may expend a sum not exceeding eight thousand dollars of the total appropriation for dredging near the state pier at New Bedford without any restriction as to contributions	25,000 00
592	For re-establishing and permanently marking certain triangulation points and sections, as required by order of the land court in accordance with section thirty-three of chapter ninety-one of the General Laws, as appearing in the Tercentenary Edition thereof, a sum not exceeding one thousand dollars	1,000 00
593	For expenses of surveying certain town boundaries, by the department of public works, a sum not	

8		P. D. 54
Item		
	exceeding five hundred dollars	500 00
594	For the operation and maintenance of the New Bedford state pier, a sum not exceeding ten thousand dollars	10,000 00
595	For the compensation of dumping inspectors, a sum not exceeding one thousand dollars	1,000 00
596	For continuing the work in gauging the flow of water in the streams of the commonwealth, a sum not exceeding four thousand dollars	4,000 00
597	For the maintenance and repair of certain property in the town of Plymouth, a sum not exceeding thirty-eight hundred dollars	3,800 00
	The unexpended balance of the appropriation made by item six hundred and thirty-eight of chapter two hundred and forty-five of the acts of nineteen hundred and thirty-one for certain work in the Taunton river, authorized by chapter four hundred and five of the acts of nineteen hundred and thirty, is hereby reappropriated.	
598	For the operation and maintenance of the Cape Cod Canal pier, a sum not exceeding thirty-five hundred dollars	3,500 00
598a	For the erection of buildings on the Cape Cod Canal pier, a sum not exceeding twelve thousand five hundred dollars	12,500 00
	Functions of the department relating to Port of Boston (the following items are to be paid from the Port of Boston receipts):	
599	For the supervision and operation of commonwealth pier five, including the salaries or other compensation of employees, and for the repair and replacement of equipment and other property, a sum not exceeding one hundred nine thousand six hundred dollars	\$109,600 00
600	For the maintenance of pier one, at East Boston, a sum not exceeding seventy-seven hundred and eighty dollars	7,780 00
601	For the maintenance and improvement of commonwealth property under the control of the department in connection with its functions relating to waterways and public lands, a sum not exceeding ninety-eight thousand two hundred dollars	98,200 00
602	For dredging channels and filling flats, a sum not exceeding fifty-five thousand dollars, the same to be in addition to any unexpended balance of the appropriation made for the purpose in the previous year	55,000 00

MISCELLANEOUS

The following items are to be paid from the Highway Fund, with the approval of the Metropolitan District Commission:

622	For maintenance of boulevards and parkways, a sum not exceeding five hundred forty-six thousand and forty dollars	546,040 00
623	For resurfacing of boulevards and parkways, a sum not exceeding one hundred thousand dollars	100,000 00
624	For maintenance of Wellington bridge, a sum not	

Item

exceeding forty-nine hundred and fifty-four dollars

4,954 00

For certain other aid:

- 630 For the compensation of certain public employees for injuries sustained in the course of their employment, as provided by section sixty-nine of chapter one hundred and fifty-two of the General Laws, as appearing in the Tercentenary Edition thereof, a sum not exceeding sixty thousand dollars, of which sum not more than twenty thousand dollars may be charged to the Highway Fund

60,000 00

DEFICIENCIES

For deficiencies in certain appropriations of previous years, in certain items, as follows:

Department of Public Works

Functions of the department relating to highways:

- For administering the law relative to advertising signs near highways, the sum of fifteen dollars and eighty-two cents, to be paid from the General Fund

15 82

- For the construction and repair of town and county ways, the sum of sixty dollars and eighty-one cents, to be paid from the Highway Fund

60 81

- For the maintenance and repair of state highways, including care of snow on highways, expenses of traffic signs and lights, and payment of damages caused by defects in state highways, with the approval of the attorney general; for care and repair of road-building machinery; and for the purchase and improvement of a nursery for roadside planting, the sum of forty dollars and sixty-four cents, to be paid from the Highway Fund

40 64

- For the purpose of enabling the department of public works to secure federal aid for the construction of highways, the sum of three dollars, to be paid from the Highway Fund

3 00

Registration of Motor Vehicles:

- For services other than personal, including traveling expenses, purchase of necessary supplies and materials, including cartage and storage of the same, and for work incidental to the registration and licensing of owners and operators of motor vehicles, the sum of three dollars and eight cents, to be paid from the Highway Fund

3 08

Functions of the department relating to waterways and public lands:

- For the supervision and operation of commonwealth pier five, including the salaries or other compensation of employees, and for the repair and replacement of equipment and other property, the sum of seventy-eight dollars and ninety-five cents, to be paid from the Port of Boston receipts

78 95

- For dredging channels and filling flats, the sum of six hundred seventy-seven dollars and two cents, to be paid from the Port of Boston receipts

\$677 02

SECTION 6. No payment shall be made or obligation incurred under authority of any special appropriation made by this act for construction of public buildings or other improvements at state institutions until plans and specifications have been approved by the governor, unless otherwise provided by such rules and regulations as the governor may make.

SECTION 8. No expenses incurred on and after the date of the passage of this act for mid-day meals by state employees, other than those who receive as part of their compensation a non-cash allowance in the form of full or complete boarding and housing, and those employees who are stationed beyond commuting distance from their homes for a period of more than twenty-four hours, shall be allowed by the commonwealth.

Chapter 296, Acts of 1933, making an appropriation for adjusting the salaries of certain employees of the Commonwealth, follows:—

SECTION 1. The sum of one hundred and fifteen thousand dollars, of which not more than thirty thousand dollars shall be paid from the Highway Fund, not more than eight thousand dollars from the several funds of the metropolitan district commission, and the remainder from the General Fund, is hereby appropriated to meet the additional payments required for paying the salaries of certain employees of the commonwealth to be increased as of June first in the current year as recommended by the governor in a message to the general court dated May twenty-fifth, nineteen hundred and thirty-three. The sum appropriated by this act shall be apportioned by the comptroller of the commonwealth to the proper appropriations made during the current year in such amounts as may be certified by the division of personnel and standardization of the commission on administration and finance to be necessary to carry out the provisions of this act.

SECTION 2. This act shall take effect upon its passage.

Chapter 371, Acts of 1933, in addition to the general appropriation act making appropriations to supplement certain items contained therein, and for certain new activities and projects, is, in part, as follows:—

SECTION 1. To provide for supplementing certain items in the general appropriation act, and for certain new activities and projects, the sums set forth in section two, for the particular purposes and subject to the conditions stated therein, are hereby appropriated from the general fund or ordinary revenue of the commonwealth, unless some other source of revenue is expressed, subject to the provisions of law regulating the disbursement of public funds and the approval thereof.

SECTION 2.

Item

Service of the Department of Public Works

Functions of the department relating to highways:

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| 578b | For completing the public works office building and for the settlement of certain claims in connection with the construction of said building, a sum not exceeding eighty-five thousand dollars, the same to be in addition to any amount heretofore appropriated for the purposes and to be paid from the Highway Fund. Any sums awarded by the department of public works on account of said claims shall be subject to the approval of the attorney general | \$85,000 00 |
| 579 | In addition to the sum heretofore appropriated by Item 579 of chapter one hundred and seventy-four of the acts of the current year, there is hereby added the further sum of one million eight hundred and thirty thousand dollars, to be paid from the High- | |

Item

	way Fund, which, together with the appropriation made by Item 585 of said chapter one hundred and seventy-four, may be used by the department of public works in supplementing and expediting the receiving of the benefits provided by the National Industrial Recovery Act or of any other federal money available for the construction of any highway projects, including bridges, authorized by special legislation, or otherwise, and of certain highway improvements in the city of Revere as provided in said Item 585 as the department may find necessary . . .	1,830,000 00
573a	For personal services of the superintendent, elevator operators, watchmen, mechanical handymen and porters employed at the new public works building a sum not exceeding five thousand dollars, the same to be in addition to any amount heretofore appropriated for the purpose, and to be paid from the Highway Fund . . .	5,000 00
580	For administering the law relative to advertising signs near highways, a sum not exceeding sixty-five hundred dollars, to be paid from the General Fund and to be in addition to any amount heretofore appropriated for the purpose . . .	6,500 00
585	(This item combined with Item 579.)	
585a	For expenses of certain highway improvements, as authorized by chapter three hundred and fifty-six of the acts of the current year, a sum not exceeding forty thousand dollars, to be paid from the Highway Fund and to be in addition to any amount heretofore appropriated for the purpose . . .	40,000 00
	Functions of the department relating to waterways and public lands:	
591a	For certain shore protection in the town of Nahant, a sum not exceeding fifteen thousand dollars, which sum is hereby made available at such time as the town of Nahant pays into the treasury of the commonwealth an equal sum of fifteen thousand dollars . . .	15,000 00
591b	For the improvement of the dike across the mouth of the Herring river in the town of Wellfleet, as authorized by chapter two hundred and seventeen of the acts of the current year, a sum not exceeding ten thousand dollars . . .	10,000 00
591c	For the extension of certain sea walls in the town of Scituate, as authorized by chapter two hundred and eighty-six of the acts of the current year, a sum not exceeding thirty-seven thousand five hundred dollars . . .	37,500 00
591d	For placing riprap for the protection of the shore at Stony Beach in the town of Hull, as authorized by chapter three hundred and thirty of the acts of the current year, a sum not exceeding eight thousand dollars . . .	8,000 00
	Functions of the department relating to Port of Boston (the following items are to be paid from the Port of Boston receipts):	

Item

602	For dredging channels and filling flats, a sum not exceeding twenty-five thousand dollars, the same to be in addition to any amount heretofore appropriated for the purpose	25,000 00
C 1933, ch. 89	For removing abandoned hulks or wrecks lying along the waterfront of Boston harbor, a sum not exceeding twenty-five thousand dollars, the same to be in addition to any amount heretofore appropriated for the purpose	25,000 00

Miscellaneous

The following item is to be paid from the Highway Fund, with the approval of the Metropolitan District Commission:

623	For resurfacing of boulevards and parkways, a sum not exceeding fifty thousand dollars, the same to be in addition to any amount heretofore appropriated for the purpose, provided that human labor be used as far as may be possible	50,000 00
636a	For the payment of claims authorized by certain resolves of the current year, a sum not exceeding fifty-six thousand eight hundred eleven dollars and eighteen cents, of which sum one hundred sixty dollars and forty-one cents shall be charged to the Highway Fund. Said payments shall be certified by the comptroller of the commonwealth only upon the filing of satisfactory releases or other evidence that the payments are accepted in full compensation on the part of the commonwealth in respect thereto	56,811 18

DEFICIENCIES

For deficiencies in certain appropriations of previous years, in certain items, as follows:

Department of Public Works

For the maintenance and repair of state highways, including care of snow on highways, expenses of traffic signs and lights, and payment of damages caused by defects in state highways, with the approval of the attorney general; for care and repair of road-building machinery; and for the purchase and improvement of a nursery for roadside planting, the sum of three hundred forty-seven dollars and eighty-four cents, to be paid from the Highway Fund	347 84
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SECTION 3. The following amendments and transfers are hereby authorized in appropriations previously made:

- Item 579 of chapter one hundred and seventy-four of the acts of the present year is hereby amended by striking out the word "twenty-five" in line six.
- Item 585 of chapter one hundred and seventy-four of the acts of the present year is hereby amended by striking out the word "thirty-three" in lines eleven and twelve and inserting in place thereof the word "thirty-four".

Item

Department of Public Works

The treasurer and receiver-general is hereby directed to assess upon the municipalities of the metropolitan parks district, including the city of Revere, in proportion to the respective taxable valuations of the property of said municipalities as defined by section fifty-nine of chapter ninety-two of the General Laws, from time to time as certified by the department of public works, such sums as represent that portion of the cost of certain work authorized by section one of chapter four hundred and forty-five of the acts of nineteen hundred and thirty-one, as amended by chapter two hundred and fifty-eight of the acts of nineteen hundred and thirty-two, which, under section six of said chapter four hundred and forty-five, as so amended, are to be paid by said municipalities, and such sums as in the aggregate amount to one third of the cost of the work authorized by section three of said chapter four hundred and forty-five, as amended.

FINANCIAL STATEMENTS

Summary of Income, Year Ending November 30, 1933

HIGHWAY FUND

*Section 34, Chapter 90, General Laws, as amended**(See Chapter 288, Acts of 1925)*

Fees (for registration of motor vehicles, licenses to operate, etc.) and fines (penalties, Sundry Courts), gross receipts . . .	\$6,317,240.63
Gasoline tax, gross	16,681,710.59
Contributions for highways and assessments (G. L. Ch. 81)	506,910.10
Appropriation balances of previous years reverting	240,541.01
Contributions and refunds	104,846.11
Sale of old materials and buildings	5,366.68
Reimbursement for repairs to guard rail and other property	7,209.67
Rent of property (Nursery)	230.00
Rent of space, Public Works Building	739.20
Slot Machine Receipts	52.90
	<hr/> \$23,864,846 89

PORT OF BOSTON FUND

(Chapter 91, General Laws)

Rents (leases and permits)	161,768 84
Reimbursement for services (inspection of dumping dredged material in Boston Harbor)	2,729 90
Use of Commonwealth Pier No. 5 (wharfage, dockage, rentals, etc.)	146,939 35
Use of Commonwealth Pier No. 1 (rentals, etc.)	1,513 23
Revenue from permits for dumping dredged material at receiving basins	4,160 19
License charges (for tidewater displacement and occupying Commonwealth tide lands (Boston Harbor)	7,221 02
Telephone pay station receipts	100 40
Sales of land	40,745 00
Sales of Boston Harbor maps	1 50
Sundries	287 87
Appropriation balances of previous years reverting	3,951 63
	<hr/> \$ 369,418 93

DEPARTMENT INCOME

(Ordinary Revenue)

Sales (specifications and plans for contracts)	430 00
Interest on Bank accounts	248 01
Aircraft Licenses	492 00
Reimbursement for services (inspection of dumping dredged material outside of Boston Harbor, ch. 196, Acts of 1925)	297 37
License charges (for tidewater displacement and occupying Commonwealth tide lands) outside of Boston Harbor	2,393 65
Certified copying charges	93 00
Sale of Atlas sheets and miscellaneous plans	865 10

Use of Province Lands (S. 25, C. 91, G. L.)	167 05	
Permits for advertising signs	13,231 92	
Use of New Bedford State Pier	19,248 84	
Use of Plymouth State Pier	200 00	
Use of Cape Cod Canal State Pier	660 00	
Reimbursement a/c removal of wrecks . .	881 98	
		\$39,208 92

IMPROVEMENT OF RIVERS AND HARBORS TRUST

(Sections 11, 29, chapter 91, General Laws)

Contributions from towns, individuals or others	\$30,050 00
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HIGHWAY TRUST

Section 30, Chapter 81, G. L.

Federal Aid (reimbursement from United States Government)	\$3,375,466 67
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FUNDS CONTRIBUTED FOR WORK UNDER SPECIAL ACTS

Contribution by City of Quincy (Chap. 222, Acts of 1932)	\$3,000 00	
Contribution by Town of Winthrop (Ch. 256, Acts of 1932)	25,000 00	
Contribution by Town of Nahant (Ch. 371, Acts of 1933)	15,000 00	
Contribution by County of Plymouth (Ch. 286, Acts of 1933)	18,750 00	
Contribution by Town of Scituate (Ch. 286, Acts of 1933)	18,750 00	
		\$80,500 00
<i>Total</i>		\$27,759 491 41

EXPENDITURES

The expenditures by the Department under the provisions of General Laws and other acts and the appropriation acts, chapters 174 and 371, acts of 1933, during the fiscal year ending November 30, 1933, were as follows:

ADMINISTRATIVE

Commissioners Associate Commissioners, Personal services of clerks, stenographers, and commissioners' travel	\$27,390 36	
Public Works Department Building, land and services	490,341 22	
Public Works Building, equipment	37,880 49	
Public Works Building, operation and maintenance	35,881 42	
		\$591,493 49

RELATING TO HIGHWAYS

<i>Personal Services</i> —Chief Engineer, Clerks and stenographers		\$86,252 88
<i>State Highways</i> —Construction (Chapter 81, G. L.) general contract work	\$3,662,306 39	
Engineering (Supervision)	654,470 16	
Rent of offices, Comm. Pier 5	3,600 00	
Highway Testing Laboratory	15,952 57	
Hingham—Hull (Chapter 118, Acts of 1931)	36 90	
Lynn—Revere, N.I.R.A.	669 74	
		4,337,035 76

Maintenance and Repair of State Highways
(Chapter 81, General Laws)

Reconstruction of State Highways

General contract work	1,571,900 32
Engineering, supervision on reconstruction	380,639 56

1,952,539 88

Ordinary Maintenance

General Maintenance	1,393,141 37
Engineering (Supervision)	309,006 47
Highway Testing Laboratory	9,038 22
Care and repair of road building machinery	87,405 08
Removal of snow from highways	506,069 26
Roadplanting and development	29,485 17
Traffic engineering, signs and traffic count	153,971 48
Paint manufacture	9,265 37
Newburyport Bridge, Salisbury-Newburyport, over Merrimack River, maintenance and operation	11,350 43
Brightman St. Bridge, Fall River-Somerset, maintenance and operation	16,703 60
New Bedford-Fairhaven Bridge, Acushnet River (Chapter 426, Acts of 1930)	14,486 01
Route and detour maps	1,154 15
Rent for offices at Commonwealth Pier 5	3,600 00
Construction of D Street Garage	40,802 91
Heating plant at D Street	7,093 80

2,592,573 32

Construction and Repair of Town and County Ways

(Section 34, Chapter 90, General Laws)

State's expenditures for work contracted for in cities and towns	1,597,721 20
Engineering and expense (supervision)	369,207 81
Rent of offices, Commonwealth Pier 5	1,800 00

1,968,729 01

Aiding Towns in the Repair and Improvement of Public Ways (Section 26, Chapter 81, General Laws, as amended)

State's expenditures for work contracted for in cities and towns	886,239 60
Engineering and expense (supervision)	78,273.55

964,513 15

Special Acts:

Expenditures under the provisions of Chapter 122, Acts of 1931	870,259 40
<i>Incidentals</i> (printing, postage, supplies, etc.)	7,845 26
<i>Advertising signs regulation of personal services and expenses</i>	21,092 36
<i>Highways in Malden, Braintree, Weymouth and Hingham</i>	3,168 90
<i>Highways in Metropolitan District</i> (Chapter 420, Acts of 1930, as amended by Chapter 450, Acts of 1931)	
Section 1. Canton, Dedham, Wellesley, etc.	136,199 51
Section 2. Canterbury Street, Boston	28,872 98

Section 3. Land taking-Neponset River, Milton	55,091 43	
Section 4. West Roxbury - Brookline Parkway	86,811 91	
		306,975 83
<i>Abolition of Grade Crossings</i> (Chapter 417, Acts of 1930)		26,037 86
<i>Plans for Weymouth Fore River Bridge</i> (Chapter 32, Resolves of 1932)		8,030 67
<i>Construction of Saugus River Bridge</i> (Chap- ter 241, Acts of 1932)		534 57
<i>Expenditures under Chapter 258, Acts of</i> 1932.		
Section 1. State Highway, Revere	366,967 70	
Section 2. Boston-Revere	177,858 88	
Section 3. Ocean Ave., Revere	202,183 89	
		747,010 47
<i>Alewife Brook Parkway Extension</i> (Chapter 302, Acts of 1932)		68,468 57
<i>Suppression of gypsy and brown-tail moths</i> on State Highways in cities and towns		11,907 67
<i>Total Expenditures for Highways</i>		\$13,972,975 56

SUMMARY OF EXPENDITURES RELATING TO WATERWAYS

General Expenses	\$50,473 53
<i>Boston Harbor:</i>	
Maintenance and Operation, Commonwealth Pier No. 1, East Boston	6,731 57
Maintenance and Operation, Commonwealth Pier No. 5, South Boston	101,319 54
Maintenance of Property	50,355 69
Dredging and Filling	39,148 13
Streets, Piers and Railroads	49 00
Removal of Hulks (Chapter 89, Acts of 1933)	71,760 01
Quincy Bay (Chapter 222, Acts of 1932)	11,906 42
<i>Outside of Boston Harbor:</i>	
Improvement of Rivers and Harbors	113,184 57
Repairing damages to shore	24,467 08
New Bedford State Pier, operation and maintenance	5,420 89
New Bedford State Pier (Chapter 273, Acts of 1932)	713 91
Expenses of Province Lands	4,700 00
Expenses of Plymouth Property	3,407 07
Topographical survey	1,000 00
Stream Gauging	4,000 00
Surveying state and town boundaries	278 32
Compensation for services of dumping inspectors	115 12
Marshfield Shore Protection (Chapter 407, Acts of 1931)	16,434 84
Scituate Shore Protection (Chapter 424, Acts of 1931)	185 06
Scituate Shore Protection (Chapter 286, Acts of 1933)	45,532 14
Construction of Pier, Cape Cod Canal (Chapter 441, Acts of 1931)	87,065 25
Cape Cod Canal Pier, operation and maintenance	2,135 46
Geological Survey Trust Fund	2,709 90
Nahant shore protection	2,093 04
Winthrop shore protection (Chapter 256, Acts of 1932)	111,279 49
Herring River, Wellfleet (Chapter 217, Acts of 1933)	4,685 12
	<hr/>
	\$761,151 15

EXPENDITURES RELATING TO THE REGISTRY OF MOTOR VEHICLES

The cost of running the Registry of Motor Vehicles . . . \$1,434,382 44

SUMMARY OF EXPENDITURES BY DEPARTMENT
FOR YEAR ENDING NOVEMBER 30, 1933

Administrative	\$591,493 49
Relating to Highways	13,972,975 56
Registry of Motor Vehicles	1,434,382 44
Relating to Waterways	761,151 15
Total	<hr/> \$16,760,002 64

COOPERATIVE WORK — SUPERVISION OF EXPENDITURES

The Department has supervised the expenditures during the year by cities, towns and counties, under chapter 81, General Laws, as amended, of approximately \$2,265,742.12 for cooperative work, in repairing, maintaining and improving certain public ways, and for other road work for which the towns and cities made contributions. All such work was carried out in conformity with contracts, specifications and plans approved by the Department.

RELATING TO HIGHWAYS
GENERAL STATEMENT

State Highways.—During the year ending November 30, 1933, the Department laid out new State highways amounting to 28.41 miles in 25 cities and towns. Under Chapter 81, General Laws, as amended by Chapter 427, Acts of 1931, 13.485 miles of State Highway were discontinued or abandoned. The total length of State Highways at the end of the year was 1824.051 miles.

Highways Constructed in 1933.—Construction has been completed on 44.366 miles of State highway, 163.220 miles of highway under the provisions of section 34, Chapter 90, General Laws, as amended, and 2.345 miles of highway under the provisions of Special Acts, making a total of 209.931 miles completed during the year.

Of the above highways completed this year, the classification according to type of pavement is as follows:

- 12.798 miles of Reinforced Cement Concrete
- 5.258 miles of Dual (reinf. conc. and bit. macadam).
- 69.897 miles of Bituminous Macadam.
- 18.065 miles of Bituminous Concrete.
- 55.944 miles of Bituminous Concrete (Mixed in Place).
- 0.246 miles of Waterbound Macadam (Bituminous Surf.).
- 26.032 miles of Gravel with Bituminous Treatment.
- 21.691 miles of Gravel.

Resurfacing, Reconstruction and Widening of State Highways.—During the year 0.758 miles of State highway were widened but not resurfaced, and 44.621 miles were resurfaced or reconstructed and widened. In addition to this work on which the surfacing has been completed, there are several miles of road in various stages of completion which are scheduled to be finished up next year.

The Resurfacing or Reconstruction of State Highways in 1933 was divided into types as follows:

- 5.219 miles of Reinforced Cement Concrete.
- 32.868 miles of Bituminous Macadam.
- 4.318 miles of Bituminous Concrete.
- 2.216 miles of Bituminous Concrete (Mixed in Place).

Surveys, Plans and Estimates.—During the year ending November 30, 1933, preliminary surveys, plans and estimates were made as follows:

For State Highway Construction.—Preliminary surveys in 8 cities and 16 towns, 41.582 miles; plans in 7 cities and 12 towns, 45.074 miles; preliminary estimates in 4 cities and 15 towns, 42.827 miles; lines and grades in 5 cities and 17 towns, 52.666 miles; and final surveys in 1 city and 19 towns, 42.441 miles.

For State Highway Reconstruction and Resurfacing.—Preliminary surveys in 8 cities and 52 towns, 112.241 miles; Plans in 7 cities and 49 towns, 95.028 miles; Preliminary estimates in 6 cities and 58 towns, 120.620 miles; lines and grades in 7 cities and 59 towns, 116.040 miles, and final surveys in 1 city and 25 towns, 46.810 miles.

Under Section 34, Chapter 90, General Laws, as amended.—Reconnaissance surveys in 10 towns, 17.384 miles; preliminary surveys in 9 cities and 155 towns, 182.740 miles; plans in 9 cities and 154 towns, 176.105 miles; preliminary estimates in 9 cities and 162 towns, 179.408 miles; lines and grades in 9 cities and 169 towns, 183.416 miles; and final surveys in 5 cities and 51 towns, 63.417 miles.

National Recovery Act.—Since the passage of the National Recovery Act, a large number of projects have been prepared, in addition to the projects authorized by this department. It is not the purpose of the following list to show the mileage of all the projects that have been worked up for the National Recovery Act, because some of the surveys, plans, and estimates had been made prior to the passage of the Act, or have been included elsewhere in the preceeding lists and would have been completed with funds of the Commonwealth, in normal times.

Preliminary plans in 3 cities and 22 towns, 54.470 miles; plans in 2 cities and 20 towns, 43.35 miles; estimates in 2 cities and 23 towns, 52.26 miles; lines and grades in 1 city and 3 towns, 3.19 miles.

Under the provisions of various acts and resolves, surveys, plans, estimates, lines and grades and final surveys were made as follows:

Chapter 24, Resolves of 1933; Section A, 18.00 miles of reconnaissance survey and plans in 3 cities and 9 towns, 29.76 miles of estimate in 3 cities and 9 towns. Section B, 5.38 miles of reconnaissance survey, plans, and estimates in 1 city and 1 town.

Chapter 14, Resolves of 1933:—29.73 miles of reconnaissance estimates in 1 city and 1 town.

Chapter 16, Resolves of 1933:—8.3 miles of reconnaissance estimates in 1 city and 1 town.

Chapter 302, Acts of 1932:—1.39 miles of reconnaissance survey and plans in 1 town.

Chapter 31, Resolves of 1933:—27.76 miles of reconnaissance estimates in 7 towns.

Chapter 23, Resolves of 1933:—25.00 miles of reconnaissance estimates in 4 cities and 7 towns.

Chapter 417, Acts of 1930:—1.10 miles of survey and plans in 1 town.

Construction Reconnaissance.—61 miles of survey and plans in 2 cities and 12 towns; 40 miles of estimate in 2 cities and 8 towns.

Reconstruction Reconnaissance.—3.72 miles of survey, plans and estimates in 1 city and 4 towns.

Precise levels have been made covering 422 miles in 34 towns; 40 bench mark disks have been set in 26 towns.

Permits.—There were 1701 permits issued during the year for opening or occupying State highways for various purposes.

Engineering Advice to Other Departments.—Advice to Department of Public Safety; 0.04 miles of survey in one town.

Advice to Department of Conservation; 1.00 mile of survey, plan and estimate in 1 town.

Engineering Advice to Municipal Authorities.—The Department furnished engineering advice without charge to 28 cities and towns in accordance with the provisions of Section 1, Chapter 81, General Laws.

Approval of Specifications.—The Department approved during the year, under the provisions of Section 7, Chapter 44, General Laws, as amended, specifications for the construction of roads in 7 towns and cities.

Approval of Bridge Plans.—The Department approved during the year, under the provisions of Chapter 313, Acts of 1923, plans for the construction of 5 bridges in 1 town and 3 cities.

Planting of Trees on State Highways.—During the past year, 1,224 trees were planted along roadsides making a total of 64,891 trees thus set out in the past twenty-nine years. In addition, there were planted throughout the State 707 shrubs, 402 vines, and 120 evergreens; also 376 small pines on bare slopes and ragged cuts.

PETITIONS, MEETINGS AND HEARINGS

In addition to the regular weekly meetings of the Department throughout the year, numerous hearings and conferences have been held, including the annual hearings in the several counties in the Commonwealth for the open discussion of questions relating to the public ways, as required by section 1, Chapter 81, General Laws; hearings on appeals from the action taken by the Registrar of Motor Vehicles in the suspension or revocation of certain licenses to operate motor vehicles in 86 cases; on an order prohibiting the use of North Adams Airport as a landing field; on an order permitting the use of the Framingham Airport as a landing field for commercial aircraft; on a special regulation for motor vehicles in Milton; on a petition for the relocation of street railway tracks in Revere; on the matter of outdoor advertising in five towns and cities; on the matter of an overpass across the location of the Boston & Maine Railroad in Revere; on the matter of traffic rules; on the matter of an investigation relative to bridge over Mystic River in the cities of Chelsea and Revere under the provisions of Chapter 36, Resolves of 1933; and on the matter of laying out State highways across railroad crossings in Auburn and Stoughton.

Petitions were received and contracts signed during the year as follows:

	Petitions	Contracts
State highways	27	29
Work under section 34, Chapter 90, General Laws, as amended		260
Work under section 26, Chapter 81, General Laws, as amended	179	178
Work under Special Acts		4
Micellaneous		10
Total	206	481

STATE HIGHWAYS

PETITIONS FOR STATE HIGHWAYS

General Laws, chapter 81, section 4, provides that —

"If county commissioners, aldermen or selectmen adjudge that public necessity and convenience require that the Commonwealth lay out and take charge of a new or existing way as a highway in whole or in part, in their county, city, or town, they may apply, by a written petition, to the division, requesting that said way be laid out and taken charge of by the Commonwealth."

Petitions under the aforesaid section have been received during the year, as follows:—

SELECTMEN OF WEBSTER: — Road extending from a point on Oxford Road about 0.35 of a mile south of the dividing line between the towns of Oxford and Webster, at or near the property of Sarah Bragg Estate, southerly, over a new location, to a point on Oxford Road about 500

feet north of the crossing of the Boston & Albany Railroad. Received Dec. 8, 1932.

SELECTMEN OF YARMOUTH:—Road extending from a point on Main Street about 900 feet southwest of South Street, northeasterly, over a new location to the junction of Main and Bridge Streets. Received Dec. 12, 1932.

SELECTMEN OF DRACUT:—Road extending from the dividing line between the city of Lowell and the town of Dracut, locally known as Riverside, Pleasant and Arlington Streets, easterly to the State highway leading from Lowell to Methuen, known as Broadway. Received Dec. 13, 1932.

MAYOR AND BOARD OF STREET COMMISSIONERS OF BOSTON:—Road extending from Boardman Street, at the 1932 State highway layout, to Bennington Street, in part over a new location and in part over Pope Street. Received Dec. 22, 1932.

MAYOR AND CITY COUNCIL OF REVERE:—Road extending from the Revere Beach Parkway, at or near Stowers Court, to Broadway, at or near Squire Road. Received Jan. 26, 1933.

SELECTMEN OF OXFORD:—Road extending from the 1921 State highway layout to the 1916 State highway layout, about nine-tenths of a mile in length, locally known as Main Street. Received Feb. 6, 1933.

SELECTMEN OF GEORGETOWN:—Road extending from the dividing line between the towns of Boxford and Georgetown, locally known as Central, North and Pond Streets, to the dividing line between the towns of Georgetown and Groveland. Received Feb. 11, 1933.

SELECTMEN OF WEST NEWBURY:—Road extending from the dividing line between the towns of West Newbury and Groveland, locally known as Georgetown, Maple and Church Streets, to the dividing line between the towns of Merrimac and West Newbury.

SELECTMEN OF GROVELAND:—Road extending from the dividing line between the towns of Georgetown and Groveland to the dividing line between the towns of Groveland and West Newbury, locally known as Pond Street and J. B. Little Road. Received Feb. 25, 1933.

SELECTMEN OF UXBRIDGE:—Road extending from the Rhode Island State line to connect with a road leading to Providence, Rhode Island. Received Dec. 29, 1932.

SELECTMEN OF BROOKLINE:—Road extending from the dividing line between the town of Brookline and the city of Newton, easterly over Boylston Street to a point about 1,100 feet easterly of Jefferson Road. Received May 5, 1933.

SELECTMEN OF BLANDFORD:—Road extending from Blandford Village to the dividing line between the towns of Russell and Blandford, locally known as the Blandford and Russell Stage Road. Received May 15, 1933.

SELECTMEN OF BLANDFORD:—Road extending from Blandford Village to the dividing line between the towns of Blandford and Otis, locally known as the Main Road. Received May 29, 1933.

SELECTMEN OF HAMILTON:—Road locally known as Main Street, extending from Bridge Street to a point in front of the Congregational Church Grounds. Received June 1, 1933.

SELECTMEN OF BROOKLINE:—Road extending from a point on Boylston Street about 1100 feet easterly of Jefferson Road easterly over Boylston Street to Washington Street; thence along Washington Street to the dividing line between the town of Brookline and the city of Boston. Received July 20, 1933.

MAYOR AND BOARD OF ALDERMEN OF WOBURN:—Road on the main highway from Woburn to Wilmington between the 1912 and 1913 State highway layouts. Received Aug. 22, 1933.

SELECTMEN OF WEST SPRINGFIELD:—Road extending from the West

Springfield terminus of the North End Bridge northerly to the dividing line between the town of West Springfield and the city of Holyoke, locally known as Riverdale Street. Received Sept. 15, 1933.

SELECTMEN OF NEWBURY: — Road extending from the dividing line between the towns of Newbury and Georgetown to the dividing line between the towns of Newbury and West Newbury, locally known as Main Street. Also a road extending from the dividing line between the towns of Newbury and West Newbury, near the Rock Farm, so called, over Scotland Road and new location, to the Newburyport Turnpike, near the Little River Bridge. Received Oct. 17, 1933.

SELECTMEN OF GEORGETOWN: — Road extending from the dividing line between the towns of Georgetown and Boxford to the dividing line between the towns of Newbury and Georgetown, locally known as Andover and North Streets. Received Oct. 17, 1933.

SELECTMEN OF WEST NEWBURY: — Road extending from the dividing line between the towns of West Newbury and Newbury, on South Street near Great Rock, to the dividing line between the towns of Newbury and West Newbury on South Street on the road to Newburyport. Received Oct. 17, 1933.

SELECTMEN OF NORTH ATTLEBOROUGH: — Road extending from the dividing line between the towns of Plainville and North Attleborough to the junction of North Washington Street and the new By-Pass Road, locally known as Park Street. Received Oct. 21, 1933.

SELECTMEN OF BOURNE: — Road on new location, extending from the intersection of Bridge Street and the State highway north of the Cape Cod Canal, northeasterly and southeasterly to the northerly side of the Cape Cod Canal, at a point about 3,000 feet easterly from existing Bourne highway bridge across the canal; and beginning again at or near the southerly side of the canal, at a point about 3,000 feet easterly from said Bourne Bridge and extending southerly to a point on the 1932 layout of the State highway leading to Falmouth, about 8,000 feet southerly from Trading Post Corner. Received Oct. 23, 1933.

SELECTMEN OF BOURNE: — Road on new location extending from the dividing line between the towns of Bourne and Plymouth, at the State highway locally known as Plymouth Road, southerly, to the northerly side of the Cape Cod Canal, at a point about 350 feet southwesterly of the intersection of Hunter Brook Road with the State highway north of the Canal; and beginning again at or near the southerly side of the Canal, at a point about 1200 feet northeasterly from the intersection of Adams Street with the State highway south of the Canal, and extending southerly and easterly to a point on said State highway about 1,500 feet westerly of the dividing line between the towns of Bourne and Sandwich. Received Oct. 23, 1933.

SELECTMEN OF FAIRHAVEN: — Road extending from the intersection of Huttleston Avenue and Adams Street, southeasterly, in part over new location and in part over Spring and Washington Streets, to the end of the present State highway on Washington Street, near Alden Road. Received Oct. 30, 1933.

SELECTMEN OF OTIS: — Road extending from the dividing line between the towns of Otis and Blandford, to the State highway in Otis Village, locally known as Blandford Road and East Otis Road, also a road extending from the State highway in Otis Village to the dividing line between the towns of Otis and Monterey, locally known as Monterey Road and West Otis Road. Received Oct. 30, 1933.

SELECTMEN OF LINCOLN: — Road extending from the State highway, locally known as Lexington Road, at or near its intersection with Brooks Road, southwesterly, over new location, to the dividing line

between the towns of Lincoln and Concord, near Concord Avenue. Received Oct. 27, 1933.

SELECTMEN OF EAST BRIDGEWATER:—Road extending from Bedford Street to the dividing line between the towns of East Bridgewater and Halifax, locally known as Whitman and Plymouth Streets. Received Nov. 7, 1933.

CONSTRUCTION AND RECONSTRUCTION OF STATE HIGHWAYS
(Chapter 81, General Laws, as amended)

The following contracts were entered into during the year for the construction and reconstruction of State highways, and work incidental thereto, in various municipalities:—

Middleborough

Dec. 27, 1932, contract made with Arute Bros., Incorporated, of Bridgewater, for constructing about 27,906 feet of State highway on Wareham Street; the surface consisting of bituminous macadam. The proposal amounted to \$56,452.50. Work completed July 15, 1933. Expenditure during 1933, \$53,669.16.

Yarmouth

Jan. 3, 1933, contract made with Sidney W. Lawrence, of Falmouth, for constructing and reconstructing about 26,805 feet of State highway on Main Street; the surface consisting of bituminous concrete. The proposal amounted to \$112,159.20. Work practically completed. Expenditure during 1933, \$109,273.66.

Cohasset-Scituate

Jan. 3, 1933, contract made with C. M. Callahan, Inc., of Boston, for constructing about 10,512 feet of State highway in Cohasset and about 20,300 feet of State highway in Scituate; the surface consisting of bituminous macadam. The proposal amounted to \$206,066.10. Work practically completed. Expenditure during 1933, \$167,233.01.

Pittsfield

Jan. 31, 1933, contract made with the Lee Construction Co., Inc., of Boston, for reconstructing a steel bridge with approaches on about 652 feet of State highway on Lebanon Road; the surface consisting of reinforced cement concrete. The proposal amounted to \$37,273.37. Work completed October 5, 1933. Expenditure during 1933, \$42,160.22.

Oxford-Webster

Feb. 21, 1933, contract made with the C. & R. Construction Company, of Boston, for constructing and reconstructing about 11,878 feet of State highway on Main Street in Oxford, and about 6,100 feet of State highway on Oxford Road in Webster, the surface consisting of bituminous macadam. The proposal amounted to \$125,452.90. Work completed November 7, 1933. Expenditure during 1933, \$132,186.29.

Yarmouth

June 6, 1933, contract made with John Burke, of Barnstable, for moving buildings of William W. Howard on the State highway in Yarmouth. The proposal amounted to \$1,173.00. Work completed October 27, 1933. Expenditure during 1933, \$1,312.89.

Wellesley

June 27, 1933, contract made with F. Pritchard & Son, Inc., of Watertown, for moving building of Jeannette Stanwood on the Boston-Worcester Turnpike. The proposal amounted to \$790.00. Work completed July 24, 1933. Expenditure during 1933, \$790.00.

Eastham

July 5, 1933, contract made with Sidney W. Lawrence, of Falmouth, for reconstructing about 2,050 feet of State highway; the surface consisting of bituminous concrete. The proposal amounted to \$9,326.50. Work completed September 20, 1933. Expenditure during 1933, \$11,827.48.

Newbury

Aug. 22, 1933, contract made with Ellsworth H. Lewis, of Andover, for reconstructing about 16,091 feet of State highway on High Street; the surface consisting of bituminous macadam. The proposal amounted to \$85,065.95. Work completed November 29, 1933. Expenditure during 1933, \$87,145.78.

Williamstown

Aug. 22, 1933, contract made with J. F. Fitzgerald Construction Company, of Boston, for reconstructing about 5,700 feet of State highway on Pownal Road, and about 950 feet of town highway on the same road in Williamstown; the surface consisting of bituminous macadam. The proposal amounted to \$103,975.63. Work about one-third completed. Expenditure during 1933, \$39,195.13.

Amesbury

Aug. 23, 1933, contract made with James E. Watkins Company, Inc., of Amesbury, for constructing about 4,199 feet of State highway on Main Street and new location; the surface consisting of bituminous macadam. The proposal amounted to \$41,743.60. Work about one-half completed. Expenditure during 1933, \$29,723.17.

Huntington

Aug. 23, 1933, contract made with The Lane Construction Corporation, of Meriden, Conn., for constructing about 28,113 feet of State highway on the Worthington Road; the surface consisting of bituminous macadam. The proposal amounted to \$129,155.40. Work about one-half completed. Expenditure during 1933, \$54,711.63.

Lanesborough-Pittsfield

Aug. 23, 1933, contract made with The Lane Construction Corporation, of Meriden, Conn., for reconstructing about 1,831 feet of State highway on North Adams Street in Lanesborough, and about 7724 feet of State highway on the same street in Pittsfield; the surface consisting of reinforced cement concrete. The proposal amounted to \$65,500.90. Work practically completed. Expenditure during 1933, \$60,957.77.

Williamstown

Sept. 5, 1933, contract made with the American Bridge Company, of Boston, for constructing a steel bridge superstructure over the Hoosic River and the Boston & Maine Railroad on Pownal Road. The proposal amounted to \$44,696.10. Work just commenced. No expenditure during 1933.

Wareham

Sept. 6, 1933, contract made with Sidney W. Lawrence, of Falmouth, for reconstructing about 8,556 feet of State highway on Agawam Road; the surface consisting of bituminous macadam. The proposal amounted to \$54,152.20. Work about one-third completed. Expenditure during 1933, \$17,664.55.

Brookline-Newton

Sept. 13, 1933, contract made with Coleman Bros., Incorporated, of Boston, for constructing about 1,655 feet of State highway on Boylston

Street in Newton, and about 4,100 feet of State highway on the same street in Brookline, and constructing a rigid frame concrete bridge with stone facing over Hammond Pond Parkway in Newton; the surface consisting of reinforced cement concrete on each side of a loam section but separated therefrom by bituminous concrete shoulders. The proposal amounted to \$208,363.00. Work about one-sixth completed. Expenditure during 1933, \$32,506.19.

Conway-Deerfield

Sept. 13, 1933, contract made with Kelleher Corporation, of Montague, for reconstruction about 4,579 feet of State highway on Conway Road in Deerfield, and about 5,630 feet of State highway on the same road in Conway; the surface consisting of bituminous macadam. The proposal amounted to \$206,730.30. Work about one-fourth completed. Expenditure during 1933, \$55,493.00.

Burlington-Winchester-Woburn

Oct. 11, 1933, contract made with M. McDonough Co., of Saugus, for reconstructing about 10,120 feet of State highway on Cambridge Street in Winchester, about 10,537 feet of State highway on the same road in Woburn, and about 19,850 feet of state highway on the same road in Burlington; the surface consisting of bituminous macadam. The proposal amounted to \$121,478.40. Work about one-sixth completed. Expenditure during 1933, \$53,328.19.

Boston-Revere

Oct. 18, 1933, contract made with The Boston Bridge Works, Incorporated, of Cambridge, for constructing two three-span deck steel stringer bridges with reinforced concrete floors in Boston, and a two-span deck plate girder bridge with reinforced concrete floor, and a three-span deck plate girder bridge with reinforced concrete floor, in Revere. The proposal amounted to \$70,379.88. Work just commenced. No expenditure during 1933.

Templeton

Nov. 1, 1933, contract made with The Lane Construction Corporation, of Meriden, Conn., for reconstructing about 15,852 feet of State highway on the Baldwinville-Phillipston Road; the surface consisting of bituminous macadam. The proposal amounted to \$66,464.95. Work just commenced. Expenditure during 1933, \$952.00.

Ashby-Townsend

Nov. 14, 1933, contract made with G. Rotondi & Son, of Melrose, for reconstructing about 21,672 feet of State highway on Ashby Road and Willard Brook Road in Ashby and Townsend; the surface consisting of bituminous macadam. The proposal amounted to \$124,161.74. Work just commenced. Expenditure during 1933, \$1,258.00.

Chester

Nov. 14, 1933, contract made with the National Construction Company, of Everett, for reconstructing 1,624 feet of State highway on the Jacobs Ladder Road; the surface consisting of bituminous macadam. The proposal amounted to \$48,337.45. Work not yet commenced.

Boston-Revere

Nov. 14, 1933, contract made with A. G. Tomasello & Son, Inc., of Boston, for constructing about 6,540 feet of State highway in Boston, and about 5,790 feet of State highway in Revere; the surface consisting of sections of reinforced cement concrete, bituminous macadam, sheet asphalt, and plain cement concrete. The proposal amounted to \$441,168.25. Work not yet commenced.

Sterling-West Boylston

Nov. 14, 1933, contract made with Mario Pandolph Company, Inc., of Needham, for reconstructing about 26,076 feet of State highway on Worcester Street, Sterling Road and West Boylston Road in Sterling and West Boylston; the surface consisting of sections of bituminous macadam with reinforced cement concrete on each side, and bituminous macadam full width. The proposal amounted to \$191,178.50. Work just commenced. Expenditure during 1933, \$2,890.85.

Boston-Revere

Nov. 14, 1933, contract made with Anthony Baruffaldi, of Somerville, for constructing the substructures for two three-span deck steel stringer bridges with reinforced concrete floors in Boston, and the substructure for a three-span deck steel stringer bridge with reinforced concrete floor and a two-span deck steel stringer bridge with reinforced concrete floor in Revere; the surface over the bridges consisting of bituminous concrete. The proposal amounted to \$183,298.25. Work just commenced.

Charlton-Oxford

Nov. 14, 1933, contract made with The Lane Construction Corporation, of Meriden, Conn., for reconstructing about 22,217 feet of State highway on Charleton Road in Oxford, and about 6,600 feet of State highway on Oxford Road in Charlton; the surface consisting of bituminous macadam. The proposal amounted to \$109,669.60. Work not yet commenced.

Marshfield-Scituate

Nov. 15, 1933, contract made with the Lee Construction Co., Inc., of Boston, for reconstructing about 5,996 feet of State highway on Bridge Street in Marshfield, and about 531 feet of State highway on Main Street in Scituate; the surface consisting of bituminous macadam. The proposal amounted to \$86,500.00. Work not yet commenced.

Marshfield-Scituate

Nov. 23, 1933, contract made with the Lee Construction Co., Inc., of Boston, for constructing a creosoted timber pile bridge at the dividing line between the towns of Marshfield and Scituate; the surface on the draw span of the bridge consisting of a structural steel grid floor with a cement concrete filler, and the surface on the rest of the bridge consisting of bituminous concrete. The proposal amounted to \$51,394.75. Work just commenced. Expenditure during 1933, \$493.00.

Easton-Stoughton

Nov. 29, 1933, contract made with Carlo Bianchi and Company, Inc., of Framingham, for reconstructing about 15,550 feet of State highway on Washington Street in Easton, and about 11,460 feet of State highway on the same road in Stoughton; the surface consisting of reinforced cement concrete and bituminous macadam. The proposal amounted to \$143,788.00. Work not yet commenced.

EXPENDITURES FOR CONSTRUCTION OF STATE HIGHWAYS

The expenditures for the construction of State highways in various Counties during the year were:—

Barnstable, \$274,246.73	Hampshire, \$110,545.90
Berkshire, \$20,709.56	Middlesex, \$760,538.27
Bristol, \$324,121.47	Norfolk, \$1,949,595.94
Essex, \$126,070.33	Plymouth, \$374,679.48
Franklin, \$363.10	Suffolk, \$293,992.35
Hampden, \$1,235.14	Worcester, \$100,900.59
	Total, \$4,336,998.86

Details of the foregoing expenditures follow:—

Barnstable County.—Barnstable, \$90,757.30; Bourne, \$130,286.66; Yarmouth, \$53,202.77.

Berkshire County.—Hinsdale, \$88.80; Pittsfield, \$20,620.76.

Bristol County.—No. Attleboro, \$2,692.01; Raynham, \$223,260.81; Seekonk, \$5,502.13; Taunton, \$92,666.52.

Essex County.—Amesbury, \$46,816.33; Lynn, \$396.49; No. Andover, \$5,710.44; Salisbury, \$73,147.07.

Franklin County.—Orange, \$363.10.

Hampden County.—Chester, \$1,235.14.

Hampshire County.—Belchertown, \$2,269.09; Huntington, \$67,328.75; Worthington, \$40,948.06.

Middlesex County.—Arlington, \$18,034.64; Belmont, \$7,003.66; Cambridge, \$3,914.41; Newton, \$731,585.56.

Norfolk County.—Brookline, \$5,742.09; Cohasset, \$138,832.68; Dedham, \$347,302.83; Norwood, \$134,531.98; Quincy, \$21,992.84; Wellesley, \$1,160,443.57; Westwood, \$126,081.94; Weymouth, \$14,668.01.

Plymouth County.—Duxbury, \$723.99; Hingham, \$178,370.06; Kingston, \$228.54; Lakeville, \$26,545.69; Marshfield, \$27.47; Middleboro, \$31,937.19; Pembroke, \$441.26; Scituate, \$136,405.28.

Suffolk County.—Boston, \$100,152.39; Revere, \$193,839.96.

Worcester County.—Athol, \$299.19; Hopedale, \$625.00; Mendon, \$450.62; Milford, \$1,029.52; Oxford, \$30,478.42; Webster, \$35,080.67; Westboro, \$646.73; West Boylston, \$29,595.09; Worcester, \$2,695.35.

EXPENDITURES UNDER THE PROVISIONS OF CHAPTER 119, ACTS OF 1931 Hingham-Hull, \$36.90

EXPENDITURES UNDER THE PROVISIONS OF CHAPTER 122, ACTS OF 1931 For State Highway Construction

Auburn-Worcester	\$86,657.03	Lakeville-Middleboro	\$41,456.15
Erving-Gill	41,142.72	Millbury-Worcester	64,573.75
Erving	1,346.86	Northboro-Shrewsbury	2,013.39
Foxboro-Sharon-Walpole-		Sharon-Norwood-Walpole	40,609.04
Wrentham	22,296.49	Shrewsbury-Worcester	88,897.39
Framingham-Natick	346,894.45	Uxbridge (Ironstone St.)	52,649.74
Framingham-Southboro	28,258.32	Uxbridge (Millville Rd.)	23.00
Gill-Greenfield	52,905.57	Williamstown	535.50
			<hr/>
			\$870,259.40

MAINTENANCE AND REPAIR OF STATE HIGHWAYS

(Section 13, Charter 81, General Laws). The expenditures during the year in various counties were:—

Barnstable, \$192,256.61	Hampshire, \$169,885.06
Berkshire, \$753,907.35	Middlesex, \$394,777.86
Bristol, \$216,890.39	Nantucket, \$110.08
Dukes, \$9,206.57	Norfolk, \$190,129.01
Essex, \$579,420.82	Plymouth, \$326,907.72
Franklin, 154,755.79	Suffolk, \$27,494.52
Hampden, \$180,655.64	Worcester, \$597,084.14
	Total, \$3,793,481.56

Details of the foregoing expenditures follow:—

Barnstable County.—Barnstable, \$8,025.90; Bourne, \$9,436.93; Brewster, \$2,492.80; Chatham, \$3,498.92; Dennis, \$2,719.12; Eastham, \$18,592.83; Falmouth, \$11,210.20; Harwich, \$3,024.81; Mashpee, \$3,519.52; Orleans, \$3,718.03; Provincetown, \$2,040.03; Sandwich, \$9,629.06; Truro, \$2,952.68; Wellfleet, \$3,429.90; Yarmouth, \$107,965.88.

Berkshire County.—Adams, \$6,549.30; Becket, \$14,225.00; Cheshire, \$11,905.28; Clarksburg, \$1,134.65; Dalton, \$8,464.84; Egremont, \$50,-221.36; Florida, \$5,610.14; Great Barrington, \$12,198.25; Hancock, \$233,-708.06; Hinsdale, \$1,615.30; Lanesboro, \$27,802.68; Lee, \$44,112.99; Lenox, \$39,138.88; New Ashford, \$641.30; New Marlboro, \$48.26; No. Adams, \$7,875.35; Otis, \$1,570.42; Pittsfield, \$188,048.32; Richmond, \$1,035.63; Sandisfield, \$1,402.08; Savoy, \$3,801.70; Sheffield, \$4,434.95; Stockbridge, \$40,456.48; Washington, \$1,879.05; West Stockbridge, \$262.32; Williamstown, \$42,107.31; Windsor, \$3,657.45.

Bristol County.—Acushnet, \$1,282.17; Attleboro, \$3,050.62; Berkley, \$3,668.88; Dartmouth, \$2,979.04; Dighton, \$22,407.26; Easton, \$20,-048.18; Fairhaven, \$21,777.44; Fall River, \$80.82; Freetown, \$11,569.93; Mansfield, \$9,906.02; Norton, \$9,362.70; North Attleboro, \$5,228.96; Raynham, \$7,355.08; Rehoboth, \$7,092.48; Seekonk, \$4,522.43; Somerset, \$43,553.31; Swansea, \$11,616.51; Taunton, \$21,868.62; Westport, \$9,-519.94.

Dukes County.—Chilmark, \$1,978.21; Edgartown, \$2,768.07; Gay Head, \$678.88; Oak Bluffs, \$468.68; Tisbury, \$556.50; West Tisbury, \$2,756.23.

Essex County.—Amesbury, \$3,295.02; Andover, \$8,708.24; Beverly, \$6,617.50; Danvers, \$7,918.13; Essex, \$16,205.22; Gloucester, \$6,140.28; Groveland, \$614.65; Hamilton, \$29,870.14; Haverhill, \$12,918.33; Ipswich, \$56,197.20; Lawrence, \$470.30; Lynn, \$2,791.03; Lynnfield, \$13,568.31; Merrimac, \$935.74; Methuen, \$5,484.50; Middleton, \$82,178.11; Newbury, \$130,550.57; Newburyport, \$2,836.36; North Andover, \$28,861.83; Peabody, \$3,986.01; Rockport, \$538.03; Rowley, \$6,218.97; Salem, \$6,-560.91; Salisbury, \$17,771.16; Saugus, \$16,349.41; Swampscott, \$3,388.79; Topsfield, \$5,457.94; Wenham, \$6,176.13; West Newbury, \$96,812.01.

Franklin County.—Ashfield, \$2,497.28; Bernardston, \$2,126.54; Buckland, \$1,872.52; Charlemont, \$11,397.75; Colrain, \$769.38; Conway, \$33,-477.82; Deerfield, \$45,201.89; Erving, \$9,516.95; Gill, \$5,169.96; Greenfield, \$5,072.92; Montague, \$1,885.02; Northfield, \$7,114.30; Orange, \$15,-985.55; Shelburne, \$7,451.65; Sunderland, \$3,075.27; Whately, \$2,140.99.

Hampden County.—Agawam, \$28,216.67; Blandford, \$1,946.01; Brimfield, \$8,856.44; Chester, \$9,785.89; Chicopee, \$1,493.60; East Longmeadow, \$1,010.47; Holland, \$10.29; Holyoke, \$2,327.58; Monson, \$1,-383.15; Palmer, \$10,493.91; Russell, \$7,058.05; Southwick, \$5,139.27; Tolland, \$25.59; Wales, \$7,202.91; Westfield, \$73,275.75; West Springfield, \$8,703.21; Wilbraham, \$13,726.85.

Hampshire County.—Amherst, \$5,284.75; Belchertown, \$73,555.04; Cummington, \$12,297.40; Easthampton, \$927.67; Goshen, \$6,398.87; Granby, \$18,713.20; Hadley, \$2,139.95; Hatfield, \$1,703.88; Huntington, \$7,233.41; Northampton, \$3,830.35; Southampton, \$6,804.27; South Hadley, \$15,983.56; Ware, \$6,309.29; Williamsburg, \$3,055.87; Worthington, \$5,647.55.

Middlesex County.—Acton, \$7,080.81; Arlington, \$12,819.85; Ashby, \$15,791.86; Ashland, \$6,121.39; Ayer, \$2,688.60; Bedford, \$536.20; Billerica, \$20,050.40; Boxboro, \$3,730.20; Burlington, \$35,126.13; Chelmsford, \$18,804.76; Concord, \$4,364.62; Dracut, \$16,827.75; Framingham, \$19,-229.31; Groton, \$33,467.08; Holliston, \$4,788.22; Hudson, \$19,828.32; Lexington, \$3,935.26; Lincoln, \$785.90; Littleton, \$4,774.81; Lowell, \$1,-467.82; Malden, \$89.82; Marlboro, \$8,813.47; Medford, \$518.37; Melrose, \$575.67; Natick, \$6,917.51; Newton, \$4,134.90; North Reading, \$1,835.86; Pepperell, \$15,546.51; Reading, \$7,042.91; Shirley, \$2,648.56; Somerville, \$1,399.40; Stoneham, \$2,191.15; Sudbury, \$7,466.35; Tewksbury, \$19,-778.64; Townsend, \$1,053.82; Tyngsboro, \$5,813.18; Waltham, \$13,148.69; Watertown, \$634.94; Wayland, \$2,969.92; Westford, \$4,265.08; Weston, \$5,259.33; Wilmington, \$5,038.35; Winchester, \$25,853.50; Woburn, \$19,-562.64.

Nantucket County.—Nantucket, \$110.08.

Norfolk County.—Avon, \$1,330.64; Bellingham, \$4,015.17; Braintree, \$28,009.75; Canton, \$3,728.77; Cohasset, \$1,771.75; Dedham, \$21,429.67; Dover, \$929.17; Foxboro, \$2,340.39; Franklin, \$1,166.31; Holbrook, \$12,848.17; Milton, \$19,182.98; Needham, \$11,149.05; Norfolk, \$439.14; Norwood, \$6,048.11; Plainville, \$3,767.52; Quincy, \$1,850.36; Randolph, \$7,391.72; Sharon, \$1,162.12; Stoughton, \$12,552.02; Walpole, \$5,996.38; Wellesley, \$5,612.27; Westwood, \$3,407.97; Weymouth, \$19,129.93; Wrentham, \$14,869.65.

Plymouth County.—Abington, \$3,116.79; Bridgewater, \$1,609.49; Brockton, \$5,388.06; Duxbury, \$2,261.91; East Bridgewater, \$7,559.53; Hanover, \$1,746.55; Hingham, \$6,631.30; Hull, \$448.21; Kingston, \$1,145.62; Lakeville, \$11,759.96; Marion, \$2,193.78; Marshfield, \$2,804.70; Mattapoisett, \$70,771.40; Middleboro, \$84,403.85; Norwell, \$2,002.43; Pembroke, \$1,785.72; Plymouth, \$9,044.18; Rochester, \$9,534.24; Rockland, \$1,223.24; Scituate, \$4,618.04; Wareham, \$77,517.13; West Bridgewater, \$1,404.74; Whitman, \$17,936.85.

Suffolk County.—Boston, \$3,155.99; Chelsea, \$696.38; Revere, \$23,642.15.

Worcester County.—Ashburnham, \$9,560.22; Athol, \$3,503.58; Auburn, \$6,522.39; Barre, \$2,809.68; Blackstone, \$8,110.17; Brookfield, \$2,027.55; Charlton, \$37,884.67; Clinton, \$10.88; Douglas, \$446.72; Dudley, \$2,643.10; East Brookfield, \$3,149.27; Fitchburg, \$2,023.86; Gardner, \$2,218.46; Grafton, \$10,998.41; Hardwick, \$272.71; Harvard, \$15,823.49; Holden, \$6,265.11; Hopedale, \$158.64; Lancaster, \$13,885.66; Leicester, \$2,154.36; Leominster, \$803.84; Lunenburg, \$2,239.22; Mendon, \$3,407.11; Milford, \$1,998.67; Millbury, \$3,125.93; Millville, \$13,579.76; New Braintree, \$77.05; North Brookfield, \$512.71; Northboro, \$18,817.60; Northbridge, \$3,239.60; Oakum, \$76,115.60; Oxford, \$109,961.69; Paxton, \$5,626.80; Petersham, \$2,854.19; Phillipston, \$840.68; Princeton, \$19,445.27; Rutland, \$25,921.45; Shrewsbury, \$50,768.77; Southboro, \$3,939.61; Southbridge, \$1,706.35; Spencer, \$2,294.83; Sterling, \$4,567.89; Sturbridge, \$5,219.65; Sutton, \$6,890.82; Templeton, \$5,780.34; Upton, \$5,601.49; Uxbridge, \$15,990.51; Warren, \$1,801.99; Webster, \$17,819.61; West Boylston, \$6,339.53; West Brookfield, \$1,204.57; Westboro, \$7,532.56; Westminster, \$8,957.94; Winchendon, \$14,694.51; Worcester, \$16,937.07.

Miscellaneous expenditures are as follows:—

Truck repairs	\$14,010.15	
Truck operation	3,038.90	
Truck plow repairs	17,547.28	
Tractor repairs	11,673.15	
Tractor operation	2,535.20	
Tractor plow repairs	12,946.41	
Snow fence	1,048.33	
Expenditures under towns	443,269.84	
		\$506,069.26
Warning signs	18,388.70	
Direction signs	51,534.42	
Regulatory signs	1,189.66	
Control signals	50,622.07	
Traffic survey	22,600.77	
Traffic permits	1,021.45	
Traffic census	8,614.41	
		153,971.48
Somerset Bridge	16,703.60	
Newburyport Bridge	11,350.43	
Fairhaven-New Bedford Bridge	14,486.01	
		42,540.04

30	P. D. 54
Detour bulletins	1,154.15
Construction of D St. garage	40,802.91
Heating Plant at D St. garage	7,093.80
Total of miscellaneous expenditures	\$751,631.64

REMOVAL OF SNOW AND ICE FROM STATE HIGHWAYS

The authority of the Department relative to the removal of snow and ice from State highways has been provided by section 19, chapter 81, General Laws, as amended.

The cooperation of the Department with officers of cities, towns and counties, in keeping open and reasonably passable for vehicles during the winter months such highways as may be selected by the Department is provided for in section 11, chapter 84, General Laws, as amended.

In accordance with the provisions of these laws, the Department selected 1,768 miles of highways on the principal routes of travel, 1,612 miles of which are State highways and 156 miles town highways.

The work of snow removal on these routes is performed in a large part by the trucks and tractors owned and operated by the Department, but certain towns and cities, by agreement with the Department, perform part of the work of snow removal on the portions of the routes within their limits. All of this work is done under the direction and supervision of the Department.

The expenditures by the Department for snow removal during the year under the provisions of both the above-mentioned laws amounted to a total of \$506,069.26, which includes the cost of maintenance and repair of the equipment, actual cost of plowing and purchase of materials, such as calcium chloride and sand for use on icy conditions of the road surfaces.

UNIFORM TRAFFIC SIGNS, LIGHTS, MARKINGS, SIGNAL SYSTEMS AND REGULATIONS

Authority and jurisdiction relating to the erection of traffic signs, lights, markings, signal systems and regulations on highways within the Commonwealth was placed in the Department of Public Works by chapter 257 of the Acts of 1928. The Department is thereby enabled to insure that all traffic control signals to be erected by the municipalities shall conform to standards adopted by the Department and cooperates with the cities and towns for the purpose of properly locating and operating such signals. All through ways desired by the municipalities must first be approved by the Department before such may become effective.

In order to secure uniformity in the matter of traffic control, the Department has issued four bulletins which present the standards required to be met by the cities and towns of the State for the installation and maintenance of traffic signs, signals and devices and traffic regulations for the control of traffic.

TRAFFIC CONTROL SIGNALS AND REGULATIONS APPROVED

During the year the Department has issued permits to cities and towns for the following traffic control features:

	In 1933
Traffic Signals, at intersections	141
Traffic Beacons	9
Through Ways	2
Traffic Signs and Markings	57
Traffic Rules and Regulations	82
Isolated Stop Signs	97

Such information included the type of district, layout of the roadway, means of traffic control, atmospheric conditions, light conditions, condition of roadway, physical obstructions in the roadway and obstructions

to view. This information is required in reports submitted to the Registry of Motor Vehicles and is supplied to the traffic engineering section for study.

DIRECTION SIGNS, ROUTE MARKERS, WARNING SIGNS AND TRAFFIC CONTROL SIGNALS ERECTED BY DEPARTMENT

The Department has given a great deal of study to the determination of the important routes of travel for the purpose of marking and furnishing direction signs as aids for traveling.

The placing of route numbers and direction signs at points of advantage on these designated highways is done by the Department both on State highways and on city and town ways, permission for the latter being obtained from the local authorities. Warning signs and traffic control signals which are erected and maintained by the Department are placed only on State highways.

At locations where the hazard was particularly great and where traffic signals could not be used, neon tubes forming the legend were erected. This type of sign is especially advantageous on foggy nights since it has greater penetrating power than any light or reflector unit.

The manufacture of many of these signs and the erection and maintenance of all of these signs and signals are part of the highway maintenance activities.

TRAFFIC ACCIDENT STUDIES

Studies have been continued to ascertain the attendant circumstances and physical characteristics at points on the highways where accidents have occurred, in order to measure the effectiveness of control or lack of control of traffic movements at such points.

TRAFFIC COUNT

In 1909 the Massachusetts Highway Commission commenced recording by actual count the number and types of vehicles on the important State highways and since that time traffic counts have been taken every three years. The Department now obtains information not only for State highways but also for other important routes.

Only seventeen stations selected for the traffic counts of the various years have been identical throughout this study. The growth of traffic volume is indicated by the following tabulation, which gives the average number of vehicles per day per station for these seventeen stations.

Year of Count	Average number of vehicles per day per station
1909	364
1912	631
1915	920
1918	1676
1921	2465
1924	4517
1927	4977
1930	6468
1933	5481

The reduction during 1933 is due probably to the fact that three of these stations are now on by-passed routes.

The traffic count of this year is taken at stations, principally intersections, on the various numbered routes. The tabulation below gives the average number of vehicles per day for an average day and for an average Sunday in August. Other data obtained but not printed herewith is used by the Department in various studies of highway traffic problems. The districts mentioned in tabulations are those outlined at the beginning of the report of the Department.

MOTOR VEHICLE TRAFFIC AT INTERSECTIONS ON NUMBERED AUTOMOBILE ROUTES

The figures given below are calculated values based upon actual counts as modified by the daily variation factors of the key stations.

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
DISTRICT 1						
4	Adams	116	—	1,012	—	499
22	Becket	8-20	2,357	2,578	4,173	5,015
22A	Becket	8-20	2,109	—	3,909	—
		Otis Rd.				
33	Blandford	North St.	—	3,095	—	4,240
58	Cheshire	8	—	4,071	—	5,272
63	Clarksburg	8	1,523	—	2,223	—
70	Dalton	8-9	5,578	5,374	7,343	6,675
92	Egremont	17-41	2,421	2,668	3,118	3,467
116	Gr. Barrington	7-17	7,562	—	9,736	—
116A	Gr. Barrington	7-118	7,548	—	9,713	—
116B	Gr. Barrington	7	6,922	7,187	8,907	9,117
116C	Gr. Barrington	17-41	3,168	3,158	4,080	4,107
125	Hancock	2	453	—	603	—
136	Hinsdale	8-143	3,646	2,051	4,818	2,364
147	Huntington	66-112	676	631	1,195	727
147A	Huntington	20-112	5,224	3,672	9,139	5,029
152	Lanesboro	7	3,183	2,588	4,289	3,343
154	Lee	20-102	4,629	5,014	5,861	6,367
156	Lenox	7-20	7,339	7,652	9,372	10,235
156A	Lenox	20	—	—	—	—
156B	Lenox	7-20	7,465	7,872	9,529	10,547
213	No. Adams	2	—	—	—	—
213A	No. Adams	8	4,860	—	7,143	—
213B	No. Adams	2-8	—	5,961	—	7,158
229	Otis	8	1,136	1,351	2,032	1,850
240	Pittsfield	8-9	14,278	8,750	19,059	11,332
240A	Pittsfield	20-41	5,266	5,370	4,639	6,956
260	Russell	20	3,825	5,712	7,092	7,822
265	Sandisfield	8	—	909	—	1,244
272	Sheffield	7	3,586	3,527	3,527	4,587
288	Stockbridge	7-141	6,606	—	8,507	—
288A	Stockbridge	141	2,731	—	3,782	—
288B	Stockbridge	102-183	—	1,552	—	2,079
338	W. Stockbridge	41-102	1,393	1,324	1,836	1,775
346	Williamstown	7	4,821	—	6,500	—
346A	Williamstown	7-43	2,961	2,422	4,093	2,904
346B	Williamstown	2-7	13,352	—	18,466	—
346D	Williamstown	2-7	1,415	3,072	1,912	3,683
346C	Williamstown	2-7	—	6,198	—	7,431
350	Windsor	109	2,917	—	3,853	—
354	Worthington	112-143	1,519	881	2,033	1,012
354A	Worthington	112-109-A	—	—	—	—
DISTRICT 2						
5	Agawam	Alt. 5	5,051	4,472	6,761	5,078
8	Amherst	9 & 116	5,059	4,116	7,036	5,225
13	Ashfield	112 & 116	1,326	1,028	2,266	1,356
13A	Ashfield	112 & 116	—	353	—	473
24	Belchertown	21 & 139	—	1,462	—	1,907
24A	Belchertown	21	3,549	2,719	5,486	3,888
29	Bernardston	5 & 10	4,795	4,225	7,666	6,071
47	Buckland	2 & 112	4,623	3,274	7,508	4,841
66	Colrain	56	—	875	—	1,295
69	Cummington	9 & 112	1,588	1,755	2,090	2,255
75	Deerfield	5-10-116	7,198	6,943	11,322	9,153
75A	Deerfield	116	—	—	—	—
83	Easthampton	10	7,258	7,588	10,145	9,954
88A	Easthampton	5	9,562	9,251	13,374	12,150
89	East Longmeadow	83	—	3,285	—	3,731
93	Enfield	21-109	2,606	—	4,188	—
94	Erving	2-63	—	—	—	—
111	Goshen	109-112	2,968	—	3,921	—
117	Greenfield	2	7,049	—	11,194	—
117A	Greenfield	5-10	6,684	10,684	7,868	11,305
117B	Greenfield	5-10	7,502	11,992	6,293	9,043
117C	Greenfield	2-2-A	—	5,651	—	8,782
121	Hadley	9	4,331	—	7,010	—
121A	Hadley	9	—	4,332	—	6,145
141	Holyoke	5	12,661	12,804	17,012	14,516
141A	Holyoke	5	—	—	—	—
141B	Holyoke	5	15,792	26,244	18,978	24,900
214	Northampton	5-10	9,470	—	14,814	—

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
214A	Northampton	5-10	—	4,726	—	6,699
220	Northfield	10-63	2,844	2,062	4,237	2,963
227	Orange	2-78	4,484	4,004	6,062	6,178
283	So. Hadley	116-139	6,794	7,117	7,558	8,509
284	Southwick	10-57	3,810	3,823	5,014	5,235
286	Springfield	5	—	—	—	—
286A	Springfield	20 21	9,207	12,399	12,338	14,082
286B	Springfield	20-20A	11,049	—	14,855	—
286C	Springfield	5-21	11,221	12,046	15,036	13,680
294	Sunderland	63-116	—	2,171	—	2,249
314	Ware	32-109	7,422	—	11,925	—
314A	Ware	9-32	—	4,059	—	5,782
330	Westfield	10	—	—	—	—
330A	Westfield	20	7,983	—	10,693	—
330B	Westfield	10-139	3,424	3,890	4,589	4,380
337	W. Springfield	5-20	18,320	21,041	24,555	24,106
337A	W. Springfield	5-20A	26,131	—	35,031	—
337B	W. Springfield	20-57	12,514	13,490	16,761	15,456
337C	W. Springfield	20	—	11,224	—	12,847
344	Wilbraham	20	7,032	—	11,153	—
345	Williamsburg	9-143	2,481	2,153	3,285	2,672

DISTRICT 3

11	Ashburnham	118	1,110	1,637	1,971	2,559
15	Athol	2-32	6,526	5,176	9,067	8,109
15A	Athol	2	7,546	—	10,128	—
15B	Athol	2	—	5,758	—	8,882
17	Auburn	12	9,543	8,259	12,995	11,768
17A	Auburn	12-20	—	12,537	—	16,804
21	Barre	32-122	2,430	3,603	1,690	2,840
21A	Barre	32-67	1,557	2,321	1,090	1,832
28	Berlin	62	2,160	2,664	2,305	3,726
34	Bolton	117	1,644	2,372	1,554	2,517
34A	Bolton	110-117	2,647	3,817	3,354	5,424
39	Boylston	70	3,574	5,630	2,573	3,982
43	Brimfield	19-20	3,133	4,965	5,187	7,592
54	Charlton	20-93	4,195	6,664	8,800	12,040
71	Dana	21	—	713	—	1,113
81	Dudley	12-197	5,684	6,810	8,869	9,567
86	E. Brookfield	9-67	6,827	5,455	10,826	7,123
100	Fitchburg	2-12	10,696	9,895	19,275	15,366
100A	Fitchburg	2-120	7,706	5,592	13,368	8,683
106A	Fitchburg	2-68	9,019	—	13,511	—
113	Grafton	122-140	5,220	5,142	9,782	8,458
113A	Grafton	30-122	5,608	10,389	5,650	9,294
113B	Grafton	122-122A	6,087	5,832	9,002	9,594
129	Harvard	110-111	2,894	2,618	5,882	4,258
138	Holden	68-122A	2,664	1,727	3,707	2,697
138A	Holden	122A	4,592	3,505	6,385	5,476
138B	Holden	120-122A	5,617	3,695	7,816	5,772
144	Hubbardston	62-68	—	5,245	—	8,150
155	Leicester	9	9,445	7,501	15,161	11,060
157	Leominster	12	7,889	7,155	12,652	10,784
157A	Leominster	13	—	3,248	—	4,896
166	Lunenburg	2-2A	3,979	3,484	8,104	5,457
166A	Lunenburg	2-13	5,847	5,685	11,910	8,684
183	Mendon	126	3,239	2,550	5,116	5,375
189	Mildford	109-126	5,416	4,363	7,859	9,422
189A	Milford	140	2,697	2,709	4,055	4,784
189B	Milford	126-140	—	6,110	—	7,602
190	Millbury	122A	4,890	6,021	6,666	9,905
192	Millville	122	5,044	—	7,456	—
195	Monson	32	1,168	1,017	1,851	1,460
217	Northboro	9-20	—	13,091	—	20,773
217A	Northboro	20	—	6,714	—	9,938
218	Northbridge	122	5,041	5,026	6,505	6,239
230	Oxford	12-20	7,803	12,075	11,845	17,169
230A	Oxford	12	6,205	—	8,487	—
231	Palmer	20	6,094	5,929	10,150	8,979
231A	Palmer	32	2,355	2,467	3,922	3,514
231B	Palmer	32	2,240	2,173	3,729	3,290
232	Paxton	122	—	2,260	—	3,809
238	Petersham	32	1,869	1,757	2,786	2,953
246	Princeton	64-120	877	1,250	1,392	1,934
246A	Princeton	64-120	758	—	1,194	—
B	Quinebaug, Conn.	131-197	1,918	2,445	2,993	3,459
262	Rutland	122-122A	3,071	1,417	4,577	2,382
276	Shrewsbury	9	19,070	16,884	30,771	27,042
		{Main St.	12,701	6,946	20,492	10,982
276A	Shrewsbury	{Maple Ave.	—	12,110	—	16,909
276B	Shrewsbury	9	—	6,304	—	9,714
276C	Shrewsbury	20	—	—	—	—

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
281	Southboro	30-85	2,279	2,009	3,738	3,278
281R	Southboro	9	-	10,345	-	16,858
282	Southbridge	124A	3,438	-	5,853	-
282A	Southbridge	93-131	3,204	4,039	5,452	5,714
287	Sterling	12-62	3,747	3,512	6,009	5,294
287A	Sterling	62-64	-	1,840	-	2,847
292	Sturbridge	20	-	5,475	-	7,854
292A	Sturbridge	15-131	4,127	7,241	6,558	9,635
292B	Sturbridge	131	2,535	-	4,026	-
		Manchaug Rd. Hartford T'npike		918	-	1,300
295	Sutton	Rt. 2	5,187	4,382	7,269	6,803
299	Templeton	2-32	4,456	3,601	6,245	5,591
299A	Templeton	32	5,903	2,711	8,266	4,209
299B	Templeton	140	-	-	-	-
308	Upton	122-146	-	4,014	-	4,253
309	Uxbridge	32	-	-	-	-
311	Wales	19	-	3,070	-	4,648
316	Warren	12-193	-	5,644	-	7,929
321	Webster	135	1,957	789	3,213	1,247
326	Westboro	9-30	1,998	10,065	3,277	16,421
326A	Westboro	9	-	11,058	-	18,104
326B	Westboro	12-110	4,938	5,252	7,826	8,145
327	W. Boylston	12-64	6,863	-	10,886	-
327A	W. Boylston	9-19	5,793	4,368	9,206	6,415
329	W. Brookfield	2	-	-	-	-
333	Westminster	2-64	7,163	6,890	10,033	10,696
333A	Westminster	64	-	1,061	-	1,647
333B	Westminster	12-64	2,480	2,670	3,449	4,171
348	Winchendon	32	1,546	1,469	2,102	2,281
348A	Winchendon	12-32	7,219	5,085	10,104	7,895
348B	Winchendon	122	4,895	-	7,297	-
353	Worcester	12	10,131	-	16,058	-
353A	Worcester	20	-	8,139	-	12,541
353B	Worcester	20	-	7,566	-	11,659
353C	Worcester	20	-	-	-	-

DISTRICT 4

10	Arlington	2-3	-	15,664	-	21,644
12	Ashby	31-26-119	2,595	2,215	5,278	4,364
14	Ashland	135	3,642	-	6,054	-
19	Ayer	2	5,208	4,863	10,819	7,619
19A	Ayer	2-110-111	5,704	6,427	11,622	10,097
23	Bedford	2A-4-62	7,779	7,646	15,528	13,733
23A	Bedford	2A-4-62	8,101	7,628	16,734	13,959
23B	Bedford	2A-4	-	6,981	-	12,577
31	Billerica	3	5,874	4,019	11,039	7,649
48	Burlington	3-62	7,403	7,307	12,785	12,088
48A	Burlington	3-62	6,047	5,851	10,444	10,101
49	Cambridge	2-3	30,013	28,409	25,594	39,256
51	Carlisle	2A-126	1,372	2,154	2,740	3,879
56	Chelmsford	3-4-126	10,936	9,576	18,842	14,281
56A	Chelmsford	4-110	13,653	11,169	27,247	20,173
56B	Chelmsford	3	12,697	-	19,353	-
56C	Chelmsford	4-126	6,761	4,619	13,494	8,319
67	Concord	2-111	5,457	6,256	13,554	9,988
67A	Concord	117-126	2,252	1,966	4,870	2,752
67B	Concord	2	-	-	-	-
67C	Concord	2-62	8,519	9,733	21,162	15,539
67D	Concord	62	3,493	-	8,285	-
67E	Concord	62-126	-	11,601	-	16,016
67F	Concord	27-126	-	5,823	-	7,123
80	Dracut	113	-	1,556	-	2,328
103	Framingham	115	8,429	-	14,245	-
103A	Framingham	126-135	20,306	26,770	33,462	43,308
103B	Framingham	30	-	4,979	-	8,124
103C	Framingham Ctr.	9-126	-	17,540	-	23,818
103D	Framingham	9-30	-	13,369	-	21,811
103E	Framingham	9	-	12,196	-	19,898
119	Groton	2A-119	2,029	2,141	4,130	3,779
119A	Groton	2A-119	3,024	3,563	6,153	6,289
119B	Groton	111-119	2,992	2,869	6,088	5,010
140	Holliston	16-126	5,245	2,889	5,654	3,120
143	Hopkinton	85-135	2,709	2,513	4,216	2,713
145	Hudson	85	4,607	3,850	7,505	5,360
159	Lexington	2-128	11,048	11,482	25,697	15,797
159A	Lexington	2A	-	-	-	-
159B	Lexington	2	13,865	13,882	33,659	19,183
159C	Lexington	2-2A4	21,964	12,988	36,977	17,947
159D	Lexington	2	6,822	-	15,805	-
159E	Lexington	128	5,601	-	13,601	-
159F	Lexington	2A-4-128	-	15,939	-	21,531
161	Lincoln	117	4,591	-	7,699	-

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
161A	Lincoln	27-117	-	2,574	-	3,148
162						
162A	Littleton	2-110-119	9,334	8,983	16,586	14,604
164	Lowell	28-133	9,539	8,847	14,497	11,234
164A	Lowell	113	10,721	-	16,296	-
169	Malden	1-60	26,731	26,018	44,695	40,464
174	Marlboro	20	11,019	5,899	15,406	8,565
174A	Marlboro	20	12,442	7,488	17,397	10,872
174B	Marlboro	20-85	-	11,223	-	16,295
174C	Marlboro	20-85	-	13,426	-	19,495
178	Maynard	62-117	3,352	3,231	5,499	4,499
180	Medford	28	12,011	-	19,821	-
180A	Medford	1-28	60,524	57,003	99,942	90,022
180B	Medford	23-60	-	23,436	-	37,010
180C	Medford	38-60	-	17,387	-	27,032
202	Natick	135	10,682	-	15,531	-
202A	Natick	115	5,173	-	7,526	-
202B	Natick	27-135	-	16,626	-	27,131
202C	Natick	9	-	10,867	-	17,674
202D	Natick	9	-	10,779	-	17,586
202E	Natick	9	-	11,599	-	18,923
202F	Natick	135	-	7,744	-	18,088
202G	Natick	9	-	11,868	-	19,362
211	Newton	20A-128	-	-	-	-
211A	Newton	16	11,406	13,047	18,607	21,259
211B	Newton	115-A-128	-	-	-	-
211C	Newton	115-128	-	-	-	-
211D	Newton	30	12,156	12,405	15,605	20,239
211E	Newton	9	-	14,074	-	22,961
211F	Newton	9	-	15,275	-	24,919
211G	Newton	9	-	13,734	-	22,411
211H	Newton	-	-	-	-	-
211I	Newton	9	-	11,905	-	19,422
211J	Newton	30-128	15,077	13,083	24,958	21,346
211K	Newton	16-128	12,019	14,894	19,609	24,298
211L	Newton	9-128	12,636	25,133	20,615	40,930
221	No. Raeding	26-62	9,798	12,084	15,993	19,084
221A	No. Raeding	28-62	9,613	11,801	15,940	18,758
236	Pepperell	113-119	1,566	1,761	3,187	3,109
236A	Pepperell	111-113	-	2,606	-	4,599
251	Reading	28	10,612	-	17,519	-
274	Sherborn	16-27	2,102	2,018	3,654	2,179
274A	Sherborn	16-27	-	2,130	-	2,299
279	Somerville	1-28-38	21,828	23,276	46,783	44,655
289	Stoneham	28-128	-	19,999	-	31,583
291	Stow	62-117	2,891	2,513	4,743	3,499
293	Sudbury	20-126	10,036	4,917	16,342	7,140
293A	Sudbury	20-126	9,635	5,237	15,809	7,605
293B	Sudbury	126	3,224	2,377	5,290	3,413
293C	Sudbury	117	-	-	-	-
300	Tewksbury	38	3,915	4,460	5,946	5,662
304	Townsend	13-119	-	3,289	-	5,805
306	Tyngsboro	3-113	9,106	8,217	15,632	12,295
306A	Tyngsboro	3-113	8,463	-	14,528	-
306B	Tyngsboro	113	-	2,540	-	3,799
313	Waltham	20-117	19,068	12,845	27,167	16,705
313A	Waltham	20-60	23,510	19,088	33,496	27,146
320	Wayland	20-27	11,409	8,309	18,522	11,572
320A	Wayland	27-30	-	6,123	-	8,220
322	Wellesley	9	5,168	16,348	7,515	26,670
322A	Wellesley	9-16	15,679	22,844	22,794	22,991
322B	Wellesley	135	8,864	12,439	12,887	20,295
322C	Wellesley	16-135	13,521	17,903	19,656	29,205
322D	Wellesley	16-135	13,008	16,286	18,911	25,432
322E	Wellesley	9	-	12,524	-	20,432
322F	Wellesley	9	-	11,835	-	18,486
322G	Wellesley	9	-	12,351	-	16,738
322H	Wellesley	2-A-110	4,287	3,973	7,177	6,855
331	Westford	110	3,810	-	6,381	-
331A	Westford	2A-110	-	3,563	-	6,147
331B	Westford	2A-110	-	3,685	-	6,353
331C	Westford	20-20A	13,346	-	19,495	-
335	Weston	30	5,903	5,344	9,632	8,611
335A	Weston	20	-	7,267	-	11,389
335B	Weston	38-129	6,548	6,194	11,309	10,637
347	Wilmington	38-62	7,638	7,310	13,193	11,984
347A	Wilmington	3-128	8,682	9,759	16,313	13,133
352	Woburn	38-128	15,258	17,979	37,317	24,142
352A	Woburn					

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
DISTRICT 5						
7	Amesbury	110	7,699	9,885	10,222	13,863
7A	Amesbury	110	4,672	6,028	5,977	8,455
9	Andover	28-133	13,395	19,234	20,776	30,565
9A	Andover	28	—	—	—	—
9B	Andover	28-125	—	12,486	—	19,969
30	Beverly	127	—	—	—	—
30A	Beverly	1-A-97	9,395	7,557	16,336	11,921
30B	Beverly	1-A-62	12,152	13,645	21,130	21,514
30C	Beverly	1-A-22-127	22,391	29,015	38,933	45,748
30D	Beverly	127	9,574	9,158	16,647	14,444
72	Danvers	1-114	16,562	15,866	27,969	24,966
72A	Danvers	1-62	16,360	14,839	27,202	21,651
95	Essex	121	4,386	6,039	7,339	9,688
95A	Essex	Western and Northern Ave.	—	—	—	—
95B	Essex	22-121	6,602	5,462	9,993	8,737
108	Georgetown	97-133	3,728	5,508	6,518	8,822
108A	Georgetown	97-133	1,789	2,335	8,128	3,741
110	Gloucester	121-127	16,287	14,146	30,725	22,443
120	Groveland	97-125	6,091	5,669	8,661	8,463
123	Hamilton	1A	—	—	—	—
132	Haverhill	108-110	10,596	12,235	18,738	19,598
148	Ipswich	1A-121	6,199	6,084	11,032	9,569
148A	Ipswich	1	—	—	—	—
167	Lynn	1A	15,371	—	26,726	—
167A	Lynn	1A-129	—	—	—	—
167B	Lynn	107	11,057	9,922	19,225	15,643
167C	Lynn	1A-129	—	22,134	—	34,898
168	Lynnfield	1-128	21,735	21,682	36,347	33,484
168A	Lynnfield	128	—	—	—	—
172	Marblehead	129	9,525	12,685	16,562	19,999
185	Methuen	28-113	15,078	13,124	24,477	21,150
185A	Methuen	110	—	—	—	—
185B	Methuen	110	8,957	6,518	15,494	10,496
185C	Methuen	110	7,331	6,523	12,686	10,565
188	Middleton	62-114	8,376	5,621	11,244	9,739
207	Newbury	1	—	—	—	—
207A	Newbury	1A	—	—	—	—
208	Newburyport	1-1A	13,093	16,955	24,771	23,823
208B	Newburyport	125	5,638	5,047	8,023	7,535
215	N. Andover	114-133	4,319	5,358	7,472	6,584
215A	N. Andover	125-133	5,867	6,099	9,739	9,771
215B	N. Andover	114-125	7,773	8,248	13,339	13,336
215C	N. Andover	125-133	5,955	—	9,887	—
215D	N. Andover	125-133	6,029	7,161	12,995	11,471
215E	N. Andover	114-125	—	6,449	—	10,777
233	Peabody	1	—	—	—	—
233A	Peabody	128	10,863	11,360	19,154	17,911
233B	Peabody	114	7,991	10,753	14,090	16,954
253	Revere	1A	18,068	15,001	31,417	23,651
253A	Revere	1A	25,839	27,188	44,929	42,867
253B	Revere	1A-60	18,643	18,510	32,419	29,185
253C	Revere	1A-107	51,765	41,303	90,011	65,121
253D	Revere	60-107	21,916	21,219	38,107	33,450
253E	Revere	60-107	24,107	19,308	41,920	30,441
257	Rockport	127	5,473	5,302	10,203	8,413
259	Rowley	1-133	9,784	11,488	13,543	17,515
259A	Rowley	1	—	—	—	—
259B	Rowley	1A-133	3,710	3,659	5,136	5,732
259C	Rowley	1A	—	—	—	—
263	Salem	1A	11,254	10,925	19,570	17,224
263A	Salem	1A	—	—	—	—
263B	Salem	1A-129	13,109	12,010	23,285	18,937
263C	Salem	107-128	8,509	18,510	14,793	19,244
264	Salisbury	1-1A	15,706	15,597	22,342	23,281
264A	Salisbury	1A	5,821	5,823	5,691	4,214
267	Saugus	1-129	14,489	16,716	24,320	25,815
267A	Saugus	1	—	—	—	—
267B	Saugus	1	14,794	11,882	24,733	18,351
267C	Saugus	1	—	15,258	—	23,564
303	Topsfield	1-97	11,135	11,528	18,518	17,576
303A	Topsfield	1	—	—	—	—
303B	Topsfield	1	10,471	10,949	17,414	16,693
334	W. Newbury	125	3,002	3,832	4,272	4,284
E	Seabrook, N. H.	1-110	9,208	11,977	9,005	17,152
DISTRICT 6						
3	Acushnet	105	1,221	1,186	2,123	1,772
16	Attleboro	1-123	11,012	8,922	16,595	12,305
16A	Attleboro	1A-123	—	6,671	—	8,805
18	Avon	28	—	—	—	—

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
25	Bellingham	140	3,288	3,054	5,151	5,394
35	Boston	3	60,839	41,639	87,294	66,236
35A	Boston	1	—	9,749	—	13,361
40	Braintree	37-128	10,275	11,067	17,147	19,353
40A	Braintree	37-128	9,956	10,796	16,615	18,880
50	Canton	128-138	15,300	15,134	27,261	20,889
53A	Canton	138	13,901	—	23,745	—
70	Dartmouth	6	9,433	9,551	14,371	11,883
74	Dedham	11	13,946	17,050	20,226	23,367
74A	Dedham	1	12,886	—	18,689	—
74B	Dedham	128-137	9,109	—	13,063	—
74C	Dedham	11-135	16,064	14,953	22,884	20,492
74D	Dedham	109-128	—	10,417	—	17,131
74E	Dedham	11-128	—	18,466	—	26,939
74F	Dedham	1-1A	—	—	—	—
77	Dighton	138	5,341	—	7,235	—
90	Easton	123-138	10,644	9,366	17,748	13,300
90A	Easton	106-123	2,844	—	4,750	—
90B	Easton	106-123	1,604	2,282	2,679	3,960
90C	Easton	106-138	9,192	8,579	15,530	12,592
90D	Easton	138 z	10,695	—	17,422	—
90E	Easton	138	10,969	—	18,739	—
97	Fairhaven	6	10,465	8,499	18,726	12,698
97A	Fairhaven	6	10,291	—	17,907	—
98	Fall River	138	14,322	12,661	21,819	15,750
102	Foxboro	140	4,540	—	7,067	—
102A	Foxboro	1	—	6,981	—	11,275
104	Franklin	140	—	—	—	—
104A	Franklin	140	5,422	5,181	8,473	9,149
105	Freetown	18,140	4,004	4,281	7,161	7,542
137	Holbrook	37	7,987	—	13,639	—
171	Mansfield	106	1,939	—	3,332	—
171A	Mansfield	140	4,592	4,853	7,902	8,422
179	Medfield	27-109	4,943	3,408	6,732	3,679
181	Medway	109	3,052	2,430	4,429	2,623
181A	Medway	137	—	—	—	—
191	Millis	137	3,181	—	4,616	—
193	Milton	28-135	5,828	9,239	9,723	11,566
193A	Milton	28	3,735	—	6,460	—
193B	Milton	135-138	14,372	9,698	24,546	13,753
193C	Milton	28-138	29,169	—	49,831	—
203	Needham	128-135	5,817	—	8,439	—
203A	Needham	Hunnewell St. Highland Ave.	6,298	—	10,121	—
203B	Needham	128	—	7,703	—	12,668
216	N. Attleboro	1	—	—	—	—
216A	N. Attleboro	1-150	11,213	11,432	16,578	16,329
222	Norton	123-140	—	4,829	—	8,381
242	Plainville	1	—	—	—	—
248	Quincy	3	17,518	17,382	24,256	20,819
248A	Quincy	28-128	4,742	12,001	7,795	17,059
249	Randolph	28	7,084	—	11,821	—
250	Raynham	102	2,104	—	3,552	—
250A	Raynham	138	7,772	—	12,971	—
270	Seekonk	Mink St. School St.	2,354	2,616	3,886	3,718
270A	Seekonk	6	16,093	—	26,565	—
270B	Seekonk	101	9,788	8,328	14,899	1,184
270C	Seekonk	6	—	14,632	—	20,804
271	Sharon	15	5,493	—	8,285	—
278	Somerset	6-138	18,691	20,438	28,493	25,738
278A	Somerset	103	7,174	—	10,503	—
278B	Somerset	138	5,260	—	7,124	—
290	Stoughton	138	12,143	—	20,740	—
297	Swansea	103	2,648	3,212	5,218	3,551
297A	Swansea	6	—	—	—	—
297B	Swansea	6-136	11,474	12,039	15,898	17,116
298	Taunton	101	3,978	—	6,993	—
298A	Taunton	101	5,113	4,564	8,897	6,435
298B	Taunton	101-140	6,082	4,993	10,615	7,039
298C	Taunton	140	4,065	—	7,098	—
298D	Taunton	101-104	—	—	—	—
312	Walpole	1	11,887	—	17,248	—
312A	Walpole	11-27	12,798	7,389	23,020	10,344
312B	Walpole	1-27	—	—	—	—
336	Westport	6	10,704	—	16,308	—
336A	Westport	6	—	9,219	—	11,469
340	Westwood	11	17,255	19,078	25,037	27,482
340A	Westwood	137	—	—	—	—
341	Weymouth	3-18	13,926	12,270	19,281	14,736
341A	Weymouth	3A	23,361	23,098	32,346	36,741
341B	Weymouth	58-102	9,043	—	10,726	—

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
341C	Weymouth	18-128	8,932	10,008	10,596	10,588
341D	Weymouth	18-58	-	5,336	-	5,646
355	Wrentham	11-140	12,779	5,688	19,315	9,085
355A	Wrentham	11-150	9,495	3,950	13,753	4,776
355B	Wrentham	142	-	-	-	-
DISTRICT 7						
1	Abington	102-123	7,404	8,083	8,781	10,979
1A	Abington	58-123	5,583	5,717	6,621	6,049
20	Barnstable	6-132	6,381	5,238	7,053	7,053
20A	Barnstable	6-49	7,369	6,355	12,092	11,215
20B	Barnstable	28-49	4,938	3,481	8,137	4,061
20C	Barnstable	28-130	3,194	2,856	5,262	3,197
20D	Barnstable	28	-	3,533	-	4,123
20E	Barnstable	28-132	-	4,667	-	5,596
20F	Barnstable	28	-	3,041	-	3,548
20G	Barnstable	28	-	3,875	-	4,521
36	Bourne	6-28	12,419	14,371	20,459	20,117
36A	Bourne	3-6	8,429	6,156	13,887	10,143
36B	Bourne	6	7,045	8,011	11,609	14,312
36C	Bourne	28	8,030	10,429	13,232	12,188
36D	Bourne	28	-	5,035	-	8,996
41	Brewster	6-24	4,022	3,204	4,529	3,768
42	Bridgewater	28	5,860	-	9,782	-
42A	Bridgewater	18-28	-	11,190	-	15,223
42B	Bridgewater	18-28	-	14,105	-	15,799
44	Brockton	123	-	-	-	-
44A	Brockton	28-37	10,306	12,476	17,599	15,619
44B	Brockton	28	8,973	9,951	13,981	17,609
44C	Brockton	28	-	5,365	-	9,494
44D	Brockton	27-28-123	-	23,418	-	41,440
44E	Brockton	27-28	-	18,981	-	33,590
52	Carver	101	-	1,702	-	2,979
52A	Carver	58-101	2,063	1,735	3,591	3,036
52B	Carver	58-101	2,113	2,106	3,633	3,929
55	Chatham	28	6,453	4,315	6,629	4,420
55A	Chatham	28	3,733	2,448	3,836	2,509
65	Cohasset	3A	-	12,782	-	20,457
76	Dennis	6-134	3,280	3,173	3,786	3,729
76A	Dennis	28-134	5,249	4,508	6,352	5,124
83	Duxbury	3A-14	4,189	3,419	6,289	4,781
85	E. Bridgewater	102-106	4,263	4,310	5,057	4,559
85A	E. Bridgewater	18-106	-	4,288	-	4,537
85B	E. Bridgewater	18	-	5,729	-	6,063
91	Edgartown	Edgartown Rd.	-	2,068	-	1,854
99	Falmouth	Vineyard Haven Rd.	7,041	5,684	11,602	6,632
99A	Falmouth	Locust and W. Main St.	-	6,315	-	7,368
122	Halifax	58-106	3,043	2,884	5,229	7,018
126	Hanover	3-123	6,565	8,031	10,069	10,502
126A	Hanover	3	8,509	7,546	13,049	9,868
126B	Hanover	3	-	8,911	-	11,651
127	Hanson	58	-	-	-	-
127A	Hanson	14-58	3,634	1,894	5,032	2,269
127B	Hanson	27-58	3,083	3,093	4,269	4,878
130	Harwich	24-28	6,341	3,855	5,489	3,950
130A	Harwich	29	-	4,829	-	4,950
135	Hingham	3A	17,061	18,882	24,168	30,147
135A	Hingham	3A	17,645	17,983	24,435	28,607
135B	Hingham	3-128	6,913	8,354	9,455	12,994
135C	Hingham	3A-128	-	7,004	-	11,212
135D	Hingham	Wash. Blvd. Rockland St.	-	14,503	-	23,366
135E	Hingham	128	*	8,183	-	13,183
135F	Hingham	3A-128	-	7,339	-	11,946
135G	Hingham	-	-	-	-	-
135H	Hingham	-	-	-	-	-
142	Hull	Nantasket Ave. Bay St.	-	16,153	-	24,024
149	Kingston	3-3A	6,109	5,921	10,475	10,059
149A	Kingston	3	-	-	-	-
149B	Kingston	27-106	3,153	3,209	5,484	5,429
149C	Kingston	3-106	-	7,810	-	13,205
150	Lakeville	18-105	1,525	1,649	2,652	2,901
150A	Lakeville	18-105	-	2,147	-	3,779
150B	Lakeville	18-101	-	3,786	-	6,663
173	Marion	6-105	7,534	5,762	12,588	8,258
175	Marshfield	3A	-	-	-	-
175A	Marshfield	3A	-	5,556	-	7,965
175B	Marshfield	3A	7,635	6,779	11,451	9,719
176	Mashpee	28	2,713	1,339	4,689	2,611

Sta. No.	Town	Routes	Number of Vehicles per average Day in August		Number of Vehicles per average Sunday in August	
			1930	1933	1930	1933
176A	Mashpee	130	—	865	—	1,009
177	Mattapoisett	6	—	6,440	—	9,378
186	Middleboro	28-101	9,182	—	15,807	—
186A	Middleboro	28	5,754	—	9,886	—
186B	Middleboro					
186C	Middleboro	28-105	—	10,410	—	16,555
186D	Middleboro	101-105	—	7,739	—	13,889
186E	Middleboro	28-101	—	9,436	—	17,122
223	Norwell	3-128	8,732	10,949	13,391	23,306
228	Orleans	6-28	4,221	3,697	4,586	4,148
228A	Orleans	6	—	5,002	—	5,881
228B	Orleans	28	—	2,622	—	2,686
236	Pembroke	3-14	4,748	4,985	8,768	9,069
235A	Pembroke	3-14	5,461	5,901	10,128	10,736
243	Plymouth	3				
243A	Plymouth	3	3,524	3,990	6,045	7,129
243B	Plymouth	3-101	—	12,707	—	15,986
244	Plympton	58-106	2,365	—	4,061	—
244A	Plympton	58	—	1,062	—	1,522
247	Provincetown	6	3,801	3,096	4,132	3,785
		Ran Point Rd.				
247A	Provincetown	Prov. Land Rd.	—	1,895	—	2,165
256	Rockland	123	5,483	6,271	7,591	7,512
256A	Rockland	123	4,698	4,680	6,506	5,605
266	Sandwich	130	6,789	1,981	11,186	3,535
266A	Sandwich	6-130	—	7,556	—	13,501
266B	Sandwich	6	—	7,604	—	13,587
269	Scituate	3A	7,154	5,739	10,736	9,702
269A	Scituate	3A-123	5,277	5,217	7,905	8,529
315	Wareham	6	7,663	6,609	13,166	9,875
315A	Wareham	6-28	11,334	11,585	19,474	20,793
315B	Wareham	28-58	6,813	8,521	11,704	12,819
315C	Wareham	6-28	10,723	11,999	18,102	16,202
315D	Wareham	6	—	5,451	—	8,148
315E	Wareham	28	—	7,373	—	14,417
322	Wellfleet	6	—	3,711	—	4,455
328	W. Bridgewater	28-106	8,123	10,296	13,558	10,703
		W. Tisbury Central				
339	W. Tisbury	W. Tisbury East	—	907	—	880
343	Whitman	18-27	7,363	7,794	8,722	8,247
343A	Whitman	27	—	4,003	—	4,237
356	Yarmouth	28	12,244	7,533	21,161	8,781
356A	Yarmouth	28	—	7,016	—	9,638

ROADSIDE MAINTENANCE AND DEVELOPMENT

Roadside maintenance as related to the care and planting of trees and other growth on the areas within the highway layouts and adjacent to the traveled surface of State highways has been one of the activities of this Department for over thirty-seven years. This work has been developed more rapidly during recent years because it has become recognized that systematic and intelligent control and development of all features of the roadside conditions are of value not only from the point of view of attractiveness in appearance but as a safety factor as well.

The Department has organized and trained a group of men under competent supervision to have charge of this work, not only for the removal and trimming of trees, brush and undesirable growth, but also for the selection and planting of new growth suitable for the locations. The removal of trees and brush that may obstruct vision at curves, intersections or other points on the highway is done to insure that operating conditions shall be as safe as possible and unnecessary growth is cleared out in order to afford attractive vistas at many scenic locations. For the protection of the roadside trees the Department has maintained a corps of inspectors to supervise the trimming that may be necessary for the construction of light and power transmission lines. In connection with this work a Nursery is maintained at Sudbury where most of the trees and shrubs for use on the highways of Massachusetts are grown and made available for use by the Department. Strict supervision of the tree trimming by the Public Service Corporations is maintained, thus preserving the natural beauty of our roadsides as much as possible and

still allowing the Public Service Corporations to extend their services.

During the year 1,224 trees were planted, making a total for the past twenty-nine years of 64,884 trees planted; also 402 vines, 120 evergreens and 376 pines were set out.

SIDEWALK CONSTRUCTION ON STATE HIGHWAYS

Under Chapter 439 of the Acts of 1931, the Department constructed one sidewalk during the year in the city of North Adams. It consisted of 1,933 lineal feet of granolithic construction and 265 lineal feet of gravel construction and the City has agreed to maintain the sidewalk.

FEDERAL AID IN CONSTRUCTING HIGHWAYS

Statements as to the acts of Congress and of the Massachusetts Legislature with respect to co-operation between the United States and the states in the construction and maintenance of highways, including the Federal Highway Act approved November 9, 1921, may be found in the annual reports of this Department for the years 1920-1927, inc.

The following Federal aid allotments have thus far been made to Massachusetts:—

For fiscal year ending June 30, 1917	\$73,850 94
For fiscal year ending June 30, 1918	147,701 90
For fiscal year ending June 30, 1919	958,145 15
For fiscal year ending June 30, 1920	1,400,078 27
For fiscal year ending June 30, 1921	1,472,788 83
For fiscal year ending June 30, 1922	1,096,176 04
For fiscal year ending June 30, 1923	730,784 03
For fiscal year ending June 30, 1924	950,448 62
For fiscal year ending June 30, 1925	1,089,806 22
For fiscal year ending June 30, 1926	1,099,891 00
For fiscal year ending June 30, 1927	1,089,055 00
For fiscal year ending June 30, 1928	1,089,100 00
For fiscal year ending June 30, 1929	1,088,808 00
For fiscal year ending June 30, 1930	1,090,077 00
For fiscal year ending June 30, 1931	1,821,569 00
For fiscal year ending June 30, 1932	1,813,916 00
For fiscal year ending June 30, 1933	1,511,244 00
Total	\$18,523,440 00

In addition to the above the following allotments were made. In 1931 an allotment was made from "Federal Emergency Advance Funds" amounting to \$1,141,460. In 1932 an allotment of \$1,716,612. was made from the Federal Emergency Relief and Construction Act. In 1933 an allotment of \$6,597,100. was made from "National Recovery Funds".

The total amount received by Massachusetts from 1916 to November 30, 1933 is \$20,481,723.23. This amount includes all types of Federal Aid.

Projects to the number of 32 have been prepared in addition to those shown in the report of the Department of Public Works for 1932. The total mileage included in the various Federal aid road projects in this state, from the commencement of work of this character to November 30, 1933, inclusive, is 1016.015. The mileage in various counties is:—

Barnstable, 97.989 miles
 Berkshire, 121.022 miles
 Bristol, 86.493 miles
 Dukes, 3.117 miles
 Essex, 77.705 miles
 Franklin, 48.691 miles

Hampden, 56.731 miles
 Hampshire, 54.300 miles
 Middlesex, 96.259 miles
 Norfolk, 86.845 miles
 Plymouth, 108.084 miles
 Suffolk, 2.590 miles
 Worcester, 176.189 miles

STATEMENT OF FEDERAL AID ROAD PROJECTS TO NOV. 30, 1933

No.	Town or City	Miles	Amount of Federal Funds Involved	Amount Rec'd.
1	*Acushnet-Fairhaven	2.182	21,820 00	21,820 00
2	*Hanover	2.708	19,480 36	19,480 36
R-2	*Hanover	2.615	39,225 00	39,225 00
3	*Malden-Melrose Saugus	1.162	11,620 00	11,620 00
4	*Danvers	1.325	15,460 22	15,460 22
5	*Windsor-Dalton	3.240	64,800 00	64,800 00
6	*Sandwich	1.818	10,678 02	10,678 02
7	*Cummington	4.659	86,816 53	86,816 53
8	*Athol-Petersham	7.016	90,074 51	90,074 51
9	*Saugus	3.122	65,472 27	65,472 27
10	*Braintree	2.420	40,554 80	40,554 80
11	*Concord-Acton-Littleton	4.849	77,600 87	77,600 87
12	*Ipswich	2.173	21,851 50	21,851 50
E-12	*Ipswich	2.081	42,333 08	42,333 08
13	*Littleton-Groton	6.450	130,504 25	130,504 25
14	*Barnstable	3.331	22,687 65	22,687 65
15	*Norwell-Hingham	4.380	59,501 75	59,501 75
17	*Lynnfield-Peabody	1.794	35,880 00	35,880 00
18	*Lunenburg	2.797	55,940 00	55,940 00
19	*Taunton	2.116	42,320 00	42,320 00
20	*Tewksbury	2.909	35,211 82	35,211 82
21	*Pittsfield-Hancock	3.637	72,483 32	72,483 32
E-21A	*Hancock-Pittsfield	2.773	125,407 10	104,392 50
E-21B	*Hancock	1.098	72,901 15	43,898 00
22	*Greenfield-Bernardston	6.426	88,270 71	88,270 71
23	*Great Barrington	2.123	31,348 89	31,348 89
24	*Seekonk	2.756	19,527 75	19,527 75
R-24	*Seekonk	2.756	41,340 00	41,340 00
25	*Billerica	0.578	38,389 77	38,389 77
26	*Greenfield-Shelburne :			
	Section 1	5.134	102,680 00	102,680 00
	Section 2	4.401	88,020 00	88,020 00
27	*Hamilton-Wenham	1.766	20,207 27	20,207 27
28	*Lanesborough :			
	Section A	0.990	19,780 00	19,780 00
	Section B	2.690	53,800 00	53,800 00
29	*Ware	2.626	46,557 55	46,557 55
30	*Brimfield	4.206	84,120 00	84,120 00
31	*Danvers-Peabody	1.107	22,140 00	22,140 00
32	*Huntington	3.078	97,163 48	97,163 48
33	*Acton-Littleton :			
	Section A	2.182	43,640 00	43,640 00
	Section B	1.624	25,847 25	25,847 25
34	*Dudley	1.359	27,180 00	27,180 00
35	*Haverhill-Methuen	4.544	90,880 00	90,880 00
36	*Eastham-Wellfleet-Provincetown :			
	Section A	10.690	91,347 85	91,347 85
	Section B	6.548	75,935 60	75,935 60
	Section C	8.043	86,130 51	86,130 51
37	*Egremont	1.164	20,579 07	20,579 07
38	*Peabody-Danvers	2.827	56,540 00	56,540 00
39	*Williamstown-New Ashford-Lanesborough :			
	Section A	0.020	9,123 64	9,123 64
	Section B	3.323	65,980 00	65,980 00
	Section C	4.590	68,850 00	68,850 00
40	*East Brookfield	1.011	20,220 00	20,220 00
41	*Ashby	1.250	22,141 03	22,141 03
42	*Washington	2.291	45,820 00	45,820 00
43	*Leicester	0.638	12,760 00	12,760 00
44	*Goshen-Cummington-Windsor :			
	Section A	1.494	29,880 00	29,880 00
	Section B	3.323	65,980 00	65,980 00
	Section C	3.780	82,915 42	82,915 42
	Section D	3.022	54,874 60	54,874 60
45	*Palmer :			
	Sections A and C	1.795	35,900 00	35,900 00
46	*Upton-Hopedale :			
	Section A	1.672	33,440 00	33,440 00
47	*Barre-Oakham	1.737	37,200 75	37,200 75
50	*Lunenburg	1.763	35,260 00	35,260 00
	*Mendon-Uxbridge :			
51	Section A	1.959	39,180 00	39,180 00
	Section B	2.504	50,080 00	50,080 00
52	*Oxford	3.208	64,160 00	64,160 00
53	*East Brookfield-Spencer-West Brookfield :			
	Section A	0.890	17,800 00	17,800 00
	Section B	1.682	33,640 00	33,640 00

*Work completed.

No.	Town or City	Miles	Amount of Federal Funds Involved	Amount Rec'd.
54	*Leicester:			
	Section A	0.829	16,580 00	16,580 00
	Section B	2.691	53,820 00	53,820 00
55	*Quincy	0.549	10,980 00	10,980 00
56	*Stoughton	2.141	42,820 00	42,820 00
NRH56	†Stoughton	2.188	117,194 77	
NRH57	†Winchester	1.031	25,346 42	
NRM57	†Woburn	1.995	28,240 19	
NRH57B	†Winchester	0.885	29,680 86	
57	*Winchester-Woburn	3.042	59,131 31	59,131 31
58	*Littleton	1.345	26,900 00	26,900 00
59	*Egremont	0.784	15,678 18	15,678 18
60	*Middletton-Danvers	1.907	38,224 70	38,224 70
61	*Winchendon-Templeton	5.393	106,117 44	106,117 44
62	*Danvers-Topsfield:			
	Section A	3.009	60,180 00	60,180 00
	Section B	3.513	76,959 91	76,959 91
63	*Essex-Ipswich	4.489	89,780 00	89,780 00
64	*Norwood	1.065	21,300 00	21,300 00
65	*North Adams	1.638	32,760 00	32,760 00
69	*Haverhill	2.657	53,049 24	53,049 24
70	*Palmer	2.550	51,000 00	51,000 00
71	*Wrentham	1.846	36,940 00	36,940 00
72	*Walpole	3.078	61,560 00	61,560 00
73	*Southwick	6.879	111,757 95	111,757 95
74	*Beckett	0.156	13,095 66	13,095 66
R74	*Becket	0.189	10,290 54	10,290 54
75	*Topsfield-Ipswich-Rowley-Newbury:			
	Section A	10.207	207,163 37	207,163 37
76	*Norfolk	1.447	28,940 00	28,940 00
77	*Merrimac	1.020	20,397 73	20,397 73
78	*Burlington	3.761	75,220 00	75,220 00
NRH78	†Burlington	3.760	45,171 06	
79	*Great Barrington	2.991	59,820 00	59,820 00
79B	*Great Barrington	0.028	8,522 99	8,522 99
80	*Lee:			
	Section A	0.909	18,180 00	18,180 00
	Section B	0.283	4,245 00	4,245 00
83	*Pembroke	2.121	31,815 00	31,815 00
84	*Sterling-West Boylston	3.491	51,974 04	51,974 04
85	*Dalton (Hinsdale Road):			
	Section A	1.033	20,660 00	20,660 00
	Section B	0.066	7,120 50	7,120 50
86	*Gay Head	3.117	40,783 51	40,783 51
87	*Dalton (Windsor Road):			
	Section A	1.056	21,120 00	21,120 00
	Section B	0.038	5,429 50	5,429 50
88	*Erving	4.537	67,485 00	67,485 00
89	*Easton:			
	Sections A and B	3.540	70,800 00	70,800 00
	Section C	3.840	62,400 00	62,400 00
NRH89A	†Easton	1.553	40,558 82	
NRH89C	†Easton	1.392	40,851 25	
90	*Brookfield-E. Brookfield	1.227	25,324 95	25,324 95
91	*Lowell	0.977	19,537 87	19,537 87
93	*Wilbraham	0.208	67,506 06	67,506 06
94	*Otis-Sandisfield	7.565	122,931 25	122,931 25
95	*Westfield	0.148	12,677 08	12,677 08
R95	*Westfield	0.148	36,944 88	36,944 88
96	*Rochester-Wareham	4.031	68,979 93	68,979 93
98	*Sheffield	3.052	61,133 85	61,133 85
99	*Gloucester	1.191	19,353 75	19,353 75
100	*Rutland	3.640	59,150 00	59,150 00
101A	*Hinsdale	0.297	4,455 00	4,455 00
101B	*Hinsdale	0.858	24,116 51	24,116 51
102A	*Plainville-Wrentham	3.254	48,810 00	48,810 00
103	*Adams	0.568	9,230 00	9,230 00
104	*Milton	3.534	70,680 00	70,680 00
105	*Rehoboth	1.438	28,760 00	28,760 00
106	*Bourne	0.522	35,002 00	35,002 00
R106	*Bourne-Falmouth	6.458	66,412 31	35,523 07
107	*Southampton	2.203	44,060 00	44,060 00
108	*Lakeville-Freetown	4.583	71,706 11	71,706 11
109	*West Brookfield	0.066	10,283 73	10,283 73
110	*Middleborough-Bridgewater	0.109	24,580 87	24,580 87
111	*Braintree	0.371	7,200 00	7,200 00
112	*No. Attleborough-Attleboro	3.278	65,560 00	65,560 00
113	*Swansea	0.692	11,245 00	11,245 00
113B	*Swansea-Somerset	3.503	64,439 74	64,439 74
114	*Lenox	2.408	39,130 00	39,130 00

*Work completed.

†Work underway.

No.	Town or City	Miles	Amount of	
			Federal Funds	Amount Rec'd.
			Involved	
115	*Plymouth	1.680	25,522 53	25,522 53
116	*Norwood-Walpole	2.453	40,878 91	40,878 91
117A	*Chelmsford	1.377	27,540 00	27,540 00
117B	*Chelmsford-Tyngsboro	4.625	89,713 81	89,713 81
118A	*Brookfield	0.620	12,400 00	12,400 00
118B	*Brookfield	0.251	3,765 00	3,765 00
119A	*Essex	0.406	8,120 00	8,120 00
120A	*Lakeville	4.789	71,835 00	71,835 00
120B	*Berkeley	0.864	12,960 00	12,960 00
120C	*Taunton-Berkeley	2.758	41,370 00	41,370 00
120D	*Taunton	0.862	12,930 00	12,930 00
121A	*Abington	0.947	17,887 34	17,887 34
121B	*Bridgewater	0.113	16,568 31	16,568 31
121C	*Weymouth	2.720	40,800 00	40,800 00
121D	*E. Bridgewater-Whitman	2.000	30,000 00	30,000 00
121E	*Abington	1.088	14,770 42	14,770 42
122A	*Barnstable	0.066	18,711 51	18,711 51
122B	*Barnstable-Mashpee	2.482	36,349 09	36,349 09
122C	*Falmouth-Mashpee	8.137	114,307 02	114,307 02
122D	*Barnstable	5.643	161,431 21	161,431 21
122E	*Barnstable	1.621	20,394 77	20,394 77
E122F	*Barnstable-Yarmouth	2.395	79,820 96	56,106 31
123A	*Southampton	2.461	47,155 67	47,155 67
124A	*Wayland	0.189	30,296 68	30,296 68
124B	*Marlborough	1.626	24,390 00	24,390 00
124C	*Weston	1.004	147,745 22	147,745 22
125A	*Wareham	3.086	68,316 11	68,316 11
125B	*Wareham	2.761	41,415 00	41,415 00
127A	*Holyoke	4.136	62,040 00	62,040 00
127B	*Easthampton-Northampton	1.762	74,258 69	74,258 69
128A	*Hinsdale	0.066	8,598 63	8,598 63
128B	*Hinsdale	0.952	14,280 00	14,280 00
129A	*Dighton-Somerset	3.465	51,975 00	51,975 00
129B	*Somerset	4.340	65,511 29	65,511 29
130A	*Auburn-Oxford	4.208	63,120 00	63,120 00
131A	*Wilbraham	0.530	7,950 00	7,950 00
131B	*Wilbraham	1.012	15,180 00	15,180 00
NRM131C	†Springfield (Force Acct.)	3.426	190,947 61	
132A	Duxbury-Kingston	2.123	31,845 00	31,845 00
133A	*North Andover	0.615	9,225 00	9,225 00
133B	*North Andover	0.771	11,565 00	11,565 00
133C	*North Andover	2.670	35,085 00	35,085 00
134A	*Barre	1.217	18,255 00	18,255 00
134B	*Barre	1.261	18,915 00	18,915 00
134C	*Barre	1.617	24,255 00	24,255 00
E134D	†Oakham-Rutland	3.493	60,604 79	49,320 52
135A	*Russell	0.557	13,919 60	13,919 60
135B	*Westfield-Russell	3.607	54,075 00	54,075 00
135C	*Russell	3.291	53,059 55	53,059 55
135D	*Russell-Huntington	3.670	55,050 00	55,050 00
136A	*Agawam	1.331	19,965 00	19,965 00
136B	*Agawam	1.515	22,725 00	22,725 00
136C	*Agawam	1.000	15,000 00	15,000 00
137A	*Sheffield	0.170	22,710 05	22,710 05
137C	*Sheffield	1.532	22,980 00	22,980 00
138A	*Chester	0.097	10,818 36	10,818 36
138B	*Chester	4.250	92,391 53	92,391 53
NRH138B	†Chester	0.307	52,686 97	
138C	*Becket	2.742	64,963 68	64,963 68
139A	*Brimfield	0.103	6,075 05	6,075 05
139B	*Brimfield	4.778	68,916 18	68,916 18
140A	*Lenox-Lee	3.519	52,785 00	52,785 00
140B	*Lee	0.057	22,620 13	26,620 13
141A	*Williamsburg	0.211	8,880 65	8,880 65
141B	*Goshen-Williamsburg	5.042	93,547 40	93,547 40
141C	*Northampton-Williamsburg	4.146	62,190 00	62,190 00
142A	*Fitchburg-Westminster	3.960	69,171 34	69,171 34
142B	*Gardner-Westminster	3.699	52,316 73	52,316 73
142C	*Gardner-Templeton	4.174	62,610 00	62,610 00
143	*Fairhaven-Mattapoisett	3.245	52,079 86	52,079 86
144A	*Canton-Stoughton	4.306	64,436 20	64,436 20
145A	*Ashland-Holliston	3.330	34,645 01	34,645 01
146A	*Paxton	1.783	26,745 00	26,745 00
146B	*Paxton-Worcester	4.930	73,950 00	73,950 00
147A	*Lenox-Pittsfield	2.349	35,235 00	35,235 00
148A	*Raynham	1.657	24,855 00	24,855 00
148B	*Raynham-Taunton	2.861	42,915 00	42,915 00
149A	*Middleborough	5.586	83,790 00	83,790 00
149B	*Middleborough	0.831	12,465 00	12,465 00

*Work completed.

†Work underway.

No.	Town or City	Miles	Amount of Federal Funds Involved	Amount Rec'd.
150A	*Littleton-Westford	1.985	29,775 00	29,775 00
150B	*Westford	2.660	39,900 00	39,900 00
151A and B	*Swansea-Somerset	0.464	89,138 06	89,138 06
152A	*Dartmouth	1.401	21,015 00	21,015 00
152B	*Dartmouth	2.858	42,870 00	42,870 00
152C	*Westport	4.634	69,510 00	69,510 00
153A	*Southampton-Easthampton	1.410	21,150 00	21,150 00
154A	*Sturbridge	2.503	37,545 00	37,545 00
155A	*West Springfield	0.549	8,235 00	8,235 00
155B	*Westfield-W. Springfield	2.348	103,968 51	103,968 51
156A	*Orange	1.058	15,870 00	15,870 00
156B	*Orange	2.607	39,105 00	39,105 00
156C	*Athol-Orange	1.544	24,606 61	24,606 61
157A	*Sandisfield-Tolland	0.644	34,803 50	34,803 50
R157A	*Sandisfield-Tolland	0.644	5,107 62	5,107 62
157B	*Sandisfield	0.473	32,037 28	32,037 28
157C	*Sandisfield-Tolland	3.033	45,570 00	45,570 00
157D	*Sandisfield	0.219	13,641 74	13,641 74
158A	*Dalton	0.430	22,087 67	22,087 67
159A	*Seekonk-Rehoboth-Swansea	1.899	49,876 52	49,876 52
159B	*Seekonk	2.251	33,765 00	33,765 00
159C	*Swansea	2.767	41,505 00	41,505 00
160A	*Lenox-Lee-Stockbridge	5.453	81,795 00	81,795 00
161A	*Brockton-W. Bridgewater	3.823	57,345 00	57,345 00
161B	*Avon-Brockton	2.201	33,015 00	33,015 00
162A	*Holliston	3.315	49,725 00	49,725 00
162B	*Milford	1.790	26,850 00	26,850 00
163A	*Amherst	0.052	3,787 09	3,787 09
163B	*Amherst	2.100	31,500 00	31,500 00
164A	*Westminster-Winchendon	0.750	42,931 27	42,931 27
164B	*Westminster-Ashburnham	3.607	54,105 00	54,105 00
164C	*Ashburnham	3.776	56,640 00	56,640 00
164D	*Winchendon	2.826	42,390 00	42,390 00
165A	*Winchendon	2.460	36,900 00	36,900 00
166	*Becket-Otis	6.043	99,077 00	99,077 00
168A	*Deerfield	3.043	45,645 00	45,645 00
169A	*Merrimac-Amesbury	3.397	50,955 00	50,955 00
E170A	*Cohasset-Hingham	3.151	255,725 40	244,035 70
E170B	*Cohasset-Seituate	5.808	193,455 25	168,327 49
NRM170C	†Quincy-Weymouth (Temp. Bridge Only)	0.521	90,463 01	
171A	*Chelmsford	1.536	23,040 00	23,040 00
172A	*Leominster-Sterling	2.713	40,770 00	40,770 00
NRH172B	†Sterling-W. Boylston	4.337	192,781 43	
173A	*Cheshire	4.377	74,965 81	74,965 81
173B	*Lanesboro	1.742	26,130 00	26,130 00
NRH173C	†Lanesboro	0.347	17,983 98	
NRM173D	†Pittsfield	1.462	53,896 49	
174A	*Marshfield	4.533	67,995 00	67,995 00
NRH174B	†Seituate-Marshfield	1.168	150,757 25	
175A	*Sandwich	0.217	22,181 26	22,181 26
175B	*Orleans	1.904	23,601 55	23,601 55
175C	*Barnstable	0.927	13,905 00	13,905 00
175D	*Sandwich	2.364	35,460 00	35,460 00
175E	*Brewster-Orleans	7.858	106,314 45	106,314 45
176A	*Plymouth	5.032	70,543 35	70,543 35
176B	*Plymouth-Bourne	2.948	44,220 00	44,220 00
177A	*Chatham	3.964	48,588 18	48,588 18
177B	*Orleans	1.802	25,838 02	25,838 02
177C	*Dennis	3.219	38,734 30	38,734 30
E177D	*Yarmouth	4.813	110,106 38	95,801 01
178A	*Chelmsford	1.262	18,930 00	18,930 00
179A	*Falmouth	3.394	50,910 00	50,910 00
180A	*Franklin-Wrentham	3.125	46,875 00	46,875 00
180B	*Bellingham-Franklin	3.889	58,335 00	58,335 00
181A	*Florida-North Adams	2.818	42,270 00	42,270 00
181B	*Florida	2.736	41,040 00	41,040 00
181C	*No. Adams-Clarksburg	3.362	50,430 00	50,430 00
181D	*Florida-Savoy	3.702	55,530 00	55,530 00
182A	*Lunenburg	1.312	19,680 00	19,680 00
183A	*Amesbury-Salisbury	1.922	28,830 00	28,830 00
183B	*Amesbury	1.329	45,345 32	45,345 32
184A	*Charlton	2.843	42,720 00	42,720 00
NRH184A	†Charlton	2.848	67,893 41	
184B	*Charlton-Sturbridge	5.623	84,345 00	84,345 00
NRH184C	†Charlton-Oxford	2.609	48,936 52	
184D	*Oxford	0.906	21,111 59	21,111 59
185A	*Buckland	1.245	18,675 00	18,675 00
185B	*Charlemont	2.433	35,640 00	35,640 00
185C	*Charlemont	0.421	34,244 36	34,244 36

*Work completed.

†Work underway.

No.	Town or City	Miles	Amount of Federal Funds Involved	Amount Rec'd.
186	*Salisbury	2.405	36,075 00	36,075 00
187A	*Bellingham	1.225	18,375 00	18,375 00
187B	*Hopedale-Mendon-Bellingham	2.502	34,650 00	34,650 00
188A	*Townsend	3.813	57,195 00	57,195 00
188B	*Pepperell-Groton	3.368	50,520 00	50,520 00
188C	*Groton-Pepperell	1.627	52,993 57	52,993 57
188D	*Townsend	0.061	17,849 72	17,849 72
188E	*Townsend	0.009	2,108 03	2,108 03
NRH188F	†Ashby-Townsend	4.023	133,967 50	
189A	*Marion-Wareham	0.582	78,792 57	78,792 57
189B	*Mattapoisett	1.804	27,060 00	27,060 00
189C	*Marion	4.554	68,310 00	68,310 00
189D	*Wareham	1.344	20,160 00	20,160 00
NRH189E	†Mattapoisett	1.583	69,419 79	
NRH189F	†Wareham	1.556	57,224 03	
190A	*Becket	2.254	33,810 00	33,810 00
190B	*Hinsdale	0.307	29,570 45	29,570.45
191A	*Falmouth	5.896	81,094 43	81,094 43
191B	*Falmouth	1.752	21,280 00	26,280 00
192A	*Groveland	1.643	24,645 00	24,645 00
192B	*Newburyport	1.745	26,175 00	26,175 00
193A	*Hadley	1.985	25,821 78	25,821 78
193B	*Hadley	2.662	26,852 35	26,852 35
194A	*Athol-Phillipston-Templeton	4.738	71,070 00	71,070 00
NRH194B	†Templeton	3.002	72,439 89	
195A	*Mansfield-Norton	0.960	17,862 40	17,862 40
195B	*Mansfield-Norton	2.617	39,255 00	39,255 00
195C	*Foxborough-Wrentham	0.927	23,175 00	23,175 00
196A	*Millbury-Grafton	4.440	66,600 00	66,600 00
197	*Plymouth	6.543	96,288 19	96,288 19
198A	*Milford-Hopedale-Upton	4.418	66,270 00	66,270 00
199A	*Newbury	0.303	127,124 34	127,124 34
199B	*Newbury-Rowley	4.437	173,737 72	173,737 72
NRH199C	†Newbury	3.047	90,975 44	
200A	*Rehoboth	1.875	28,125 00	28,125 00
200B	*Taunton-Dighton-Rehoboth	5.690	86,868 07	86,868 07
201	*Wilbraham	1.530	22,950 00	22,950 00
202A	*Hanover-Pembroke	2.061	44,462 11	44,462 11
202B	*Duxbury-Kingston-Pembroke	6.164	92,460 00	92,460 00
203	*Natick-Wellesley	2.066	30,990 00	30,990 00
204	*Erving	3.214	48,210 00	48,210 00
205	*Dalton	0.913	22,152 43	22,152 43
206A	*Billerica	1.898	35,399 86	35,399 86
206B	*Billerica	0.978	14,670 00	14,670 00
206C	*Billerica-Chelmsford	2.874	40,148 95	40,148 95
207A	*Bridgewater-Middleboro	10.474	173,628 65	173,628 65
208A	*Weston	0.186	39,270 35	39,270 35
208B	*Weston	1.224	96,576 94	96,576 94
209A	*Milton-Quincy-Randolph	3.315	39,725 00	49,725 00
210A	*Becket-Lee	7.192	107,880 00	107,880 00
210B	*Becket	2.886	43,290 00	43,290 00
211A	*Northborough-Shrewsbury-Southborough	11.272	391,333 56	391,333 56
211B	*Framingham-Southboro	4.898	82,947 44	82,947 44
211C	*Framingham-Natick	4.061	100,200 00	94,244 62
E211D	*Wellesley	2.272	240,636 35	235,595 86
E211E	*Wellesley	1.108	376,899 31	370,192 46
212	*North Attleborough	2.123	45,332 76	45,332 76
213	*Attleborough	1.455	58,131 53	58,131 53
214A	*Tyngsborough	0.540	209,285 64	209,285 64
215A	*Palmer-Monson	0.606	79,452 36	79,452 36
216A	*Dedham	0.738	10,935 00	10,935 00
217	*Chester-Huntington	3.781	61,090 38	61,090 38
218	*Canton-Dedham-Westwood	3.947	202,012 06	129,297 55
219A	*Marlborough-Northboro	5.109	416,409 15	416,409 15
219B	*Northboro-Shrewsbury	2.578	56,157 49	56,157 49
220A	*Foxborough-Plainville-Wrentham	5.722	372,032 25	372,032 25
221	*Egremont	2.135	53,375 00	53,375 00
222	*Deerfield-Greenfield	0.337	127,099 76	127,099 76
223A	*Williamstown	1.789	38,956 97	38,956 97
224A	*Andover- No. Reading-Reading	4.431	214,676 48	214,676 48
225A	*Erving	1.425	113,775 43	113,775 43
225B	*Gill-Greenfield	5.147	160,827 89	160,827 89
225C	*Erving-Gill	0.017	194,050 94	194,050 94
226A	*Auburn-Worcester	4.809	143,134 13	143,134 13
226B	*Millbury-Worcester	2.125	182,684 81	182,684 81
226C	*Shrewsbury-Worcester	3.015	89,151 11	69,123 91
227	*Foxborough-Sharon-Wrentham	4.314	161,995 10	161,995 10
228A	*Uxbridge	4.171	126,823 58	126,823 58
229A	*Dedham-Westwood-Needham	3.448	100,412 55	79,752 13
229B	*Needham-Wellesley	3.653	103,047 67	86,043 72
230A	*Salisbury	2.184	38,084 39	38,084 39

*Work completed.

†Work underway.

No.	Town or City	Miles	Amount of Federal Funds Involved	Amount Rec'd.
231A	*Sharon-Walpole-Norwood	5.458	142,791 40	142,791 40
231B	*Dedham-Westwood-Norwood	3.566	168,318 57	130,156 22
232A	*Littleton	0.420	32,130 37	32,130 37
233A	*Lakeville-Middleboro	4.112	124,205 92	124,205 92
E235A	*Wellesley	1.360	125,962 33	125,962 33
NRM235B	†Brookline-Newton	1.089	210,478 94	
E236	*Lakeville-Middleborough-Taunton-Rayn- ham	6.344	219,779 15	123,134 70
E237A	*Oxford-Webster	3.375	127,719 68	85,089 53
238A	*Granby	3.154	37,134 33	37,134 33
E238B	*Belchertown	2.812	49,582 76	49,582 76
240A	*Worcester-W. Boylston	2.229	32,937 27	32,937 27
NRH240B	†West Boylston	0.594	15,630 28	
NRM241A	†E. Boston-Revere	2.294	713,586 36	
NRM242A	†Arlington-Belmont-Cambridge	1.557	597,218 35	
NRH243A	†Amesbury	0.795	44,977 46	
NRM244A	†Boston (Hyde Park)	0.296	39,246 79	
NRS245A	†Huntington	5.313	141,724 44	
NRS246	†Conway-Deerfield	6.193	225,494 28	32,408 40
Grand Totals		1016.015	\$24,547,747 91	\$20,481,723.23

STATEMENT OF FEDERAL EMERGENCY ADVANCE FUNDS

No.	Town or City	Amount of Federal Aid Involved	Amount Rec'd
122D	*Barnstable	\$116,571 15	\$116,571 15
124C	*Weston	132,685 22	132,685 22
158C	*Groton-Pepperell	9,516 49	9,516 49
199B	*Newbury-Rowley	62,185 37	62,185 37
208B	*Weston	78,216 94	78,216 94
219A	*Marlborough-Northborough	329,743 37	399,743 37
220A	*Foxborough-Plainville-Wrentham	286,202 25	286,202 25
224A	*Andover-No. Reading-Reading	90,544 85	90,544 85
225A	*Erving	35,794 36	35,794 36
*Total		\$1,141,460 00	\$1,141,460 00

STATEMENT OF FEDERAL EMERGENCY RELIEF AND CONSTRUCTION ACT

		Reg. Fed. Aid	Emerg. Const. Funds
E-12	*Ipswich	\$14,393 25	\$27,939 83
E-21A	*Hancock-Pittsfield	12,540 71	112,866 39
E-21B	*Hancock	10,935 17	61,965 98
E-122F	*Barnstable-Yarmouth	18,358 82	61,462 14
E-134D	†Oakham-Rutland	16,076 20	44,528 59
E-170A	*Cohasset-Hingham	30,687 05	225,038 35
E-170B	*Cohasset-Scituate	44,260 96	149,194 29
E-177D	*Yarmouth	28,968 14	81,138 24
E-211D	*Wellesley	37,516 72	203,119 63
E-211E	*Wellesley	64,803 13	312,096 18
E-235A	*Wellesley	34,009 83	91,952 50
E-236	*Lakeville-Middleborough-Taunton-Raynham	7,981 34	211,797 81
E-237A	*Oxford-Webster	28,419 71	99,299 97
E-238B	*Belchertown	15,370 66	34,212 10
Totals		\$364,321 69	\$1,716,612 00
Total apportionment of Emerg. Const. Funds			1,716,612 00
Total obligated			1,716,612 00
Balance			\$ 0 00

STATEMENT OF NATIONAL RECOVERY FUNDS

No.	Town or City	Regular Fed. Aid Involved	National Re- covery Funds Involved
The Projects listed below are all "Underway".			
NRH56	Stoughton		\$117,194 77
NRH57	Winchester	\$12,600 00	12,746 42
NRM57	Woburn	14,100 00	14,140 19
NRH57B	Winchester	14,800 00	14,880 86
NRH78	Burlington	22,500 00	22,671 06
NRH89A	Easton		40,558 82
NRH89C	Easton		40,851 25
NRM131C	Springfield		190,947 61
NRH138B	Chester		52,686 97

*Work completed.

†Work underway.

No.	Town or City	Regular Fed. Aid Involved	National Re- covery Funds Involved
NRM170C	Quincy-Weymouth (Temp. Bridge)		90,463 01
NRH172B	Sterling-W. Boylston	96,200 00	96,581 43
NRH173C	Lanesboro	8,000 00	9,983 98
NRM173D	Pittsfield	23,000 00	30,896 49
NRH174B	Scituate-Marshfield		150,757 25
NRH184A	Charlton	33,900 00	34,083 41
NRH184C	Charlton-Oxford	20,523 83	28,412 69
NRH188F	Ashby-Townsend	16,435 81	117,581 69
NRH189E	Mattapoisett	30,000 00	39,419 79
NRH189F	Wareham	25,000 00	82,224 03
NRH194B	Templeton	36,200 00	36,239 89
NRH199C	Newbury	44,000 00	46,975 44
NRM235B	Brookline-Newton		210,478 94
NRH240B	West Boylston	7,500 00	8,130 28
NRM241A	East Boston-Revere		713,586 36
NRM242A	Arlington-Belmont-Cambridge		597,218 35
NRH243A	Amesbury	17,984 24	26,993 22
NRM244A	Boston (Hyde Park)		39,246 79
NRS245A	Huntington		141,724 44
NRS246	Conway-Deerfield		225,494 28
Totals		\$422,743 88	\$3,183,119 71

Note:—Amount of National Recovery Funds received prior to Dec. 1, 1933=\$32,408.40 on project NRS 246, Conway-Deerfield.

	N R H.	N R M.	N R S.
Apportionment	\$1,932,950 00	\$4,136,382 00	\$527,768 00
Obligated	928,923.28	1,886,977 71	367,218 72
(As of Nov. 30, 1933) Balance	\$1,004,026.72	\$2,249,404 29	\$160,549 28

BRIDGES

During the year the Department has prepared designs and plans for, and done other work relating to, bridges throughout the Commonwealth. The various cities and towns, the localities therein, the character of the structure and other details are as follows:

BRIDGES AND STRUCTURES BUILT OR CONTRACTED FOR

Cities and Towns, Locality and Character of Structure.

- Alford — Green River Road over Green River; two 33-foot spans, reinforced concrete beam and slab.
- Ashland — Homer Avenue over Cold Spring Brook; one 17-foot span, reinforced concrete slab.
- Belchertown — Enfield Road over Jabish Brook; one 20-foot span, reinforced concrete slab.
- Belchertown — Parker Road over Jabish Brook; one 18-foot span, reinforced concrete slab.
- Charlton — Sturbridge Road over Cary Brook; one 15-foot span, reinforced concrete slab.
- Dartmouth — Potomska Road over Little River; two 18-foot spans, reinforced concrete beam and slab; one 63-foot span, steel girder.
- Dedham — Providence Turnpike over Circumferential Highway; one 83-foot span, steel deck girder with reinforced concrete floor.
- Dedham — Providence Turnpike over High Street; one 73-foot span, steel deck girder with reinforced concrete floor.
- Dedham — Providence Turnpike over Williams Street; one 64-foot span, steel deck girder with reinforced concrete floor.
- Dedham — Reinforced concrete mat and culvert at sites of High Street and Williams Street bridges.
- Dedham — Retaining walls at High Street and Williams Street bridges.
- Dighton — Taunton Road at Taunton line over Three Mile River; one 42-foot span, reinforced concrete beam and slab.
- Edgartown — At Oak Bluffs line over Sengekontacket Pond; sixteen 15-foot spans, timber trestle.
- Framingham — Concord Street over Sudbury River; two 28-foot spans, reinforced concrete beam and slab.
- Granby — Belchertown Road over Forge Pond Brook; one 15-foot span, reinforced concrete slab.

- Granville — Main Road at Tolland line over Hubbard River; one 26-foot span, reinforced concrete beam and slab.
- Hingham — Cohasset Road over tracks of New York, New Haven and Hartford Railroad, one 57-foot span, steel stringers with reinforced concrete floor.
- Hingham — Cohasset Road over Weir River; one 17-foot span, reinforced concrete slab.
- Hinsdale — Fassell Road over Branch of Housatonic River; one 20-foot span, reinforced concrete slab.
- Lee — West Park Street over Canal; one 23-foot span, reinforced concrete beam and slab.
- Lee — West Park Street over Housatonic River; two 60-foot spans, steel stringers with reinforced concrete floor.
- Middleborough — Cattle pass over Thompson Street; two 24-foot spans and one 40-foot span, reinforced concrete girder.
- Needham — Circumferential Highway under tracks of New York, New Haven and Hartford Railroad; one 75-foot span, steel girder.
- Needham — Highland Avenue over Circumferential Highway; one 63-foot span, concrete rigid frame.
- Newbury — Middle Street over Parker River; one 42-foot span, steel stringer.
- Newton — Retaining walls at Centre Street on Worcester Turnpike.
- Newton — Retaining walls at Quinobequin Road and Chestnut Street, on Worcester Turnpike.
- Newton — Retaining walls at Parker Street on Worcester Turnpike.
- Newton — Worcester Turnpike over Centre Street; one 93-foot span, three-hinged steel arch.
- Newton — Worcester Turnpike over Chestnut Street; one 50-foot span, reinforced concrete rigid frame.
- Newton — Worcester Turnpike over Quinobequin Road; one 51-foot span, reinforced concrete rigid frame.
- Newton — Worcester Turnpike over Sudbury Aqueduct; one 9-foot span, reinforced concrete saddle.
- Newton — Worcester Turnpike under Parker Street; two 30-foot spans, steel stringers with reinforced concrete floor.
- Pittsfield — State Highway over Phelps Brook; one 31-foot span, reinforced concrete beam and slab.
- Revere — Beach Street over tracks of Boston and Maine Railroad; two 35-foot spans, reinforced concrete beam and slab, one 62-foot span, steel girders.
- Savoy — Adams Road over Westfield River; one 24-foot span, reinforced concrete beam and slab.
- Savoy — Adams Road over Sturtevant Brook; one 24-foot span, reinforced concrete beam and slab.
- Wellesley — Worcester Turnpike over tracks of Boston and Albany Railroad, one 83-foot span, steel plate girder.
- Wellesley — Worcester Turnpike over Aqueduct at Station 11+91; one 6-foot span, reinforced concrete saddle.
- Wellesley — Worcester Turnpike over Weston Road; one 58-foot span, reinforced concrete rigid frame.
- Wellesley — Worcester Turnpike under Washington Street; two 75-foot spans, steel deck plate girders with reinforced concrete floor.
- Wellesley — Worcester Turnpike under Cedar Street; two 40-foot spans, steel stringers with reinforced concrete floor.
- Wellesley — Worcester Turnpike over Cliff Road; one 50-foot span, reinforced concrete rigid frame.
- Wellesley — Cliff Road over tracks of Boston & Albany Railroad; one 64-foot span, steel plate girder.

- Wellesley — Worcester Turnpike over Adequct at Station 11+91; one 6-foot span, reinforced concrete saddle.
- Wellesley — Worcester Turnpike over Rosemary Brook; one 12-foot span, reinforced concrete slab.
- Wellesley — Retaining walls at Washington Street bridge on Worcester Turnpike.
- Westfield — Main Street over Powder Mill Brook; twenty-two 18-foot spans and one 32-foot span, reinforced concrete pile trestle.
- Westfield — Main Street over Westfield River; two 50-foot spans, steel stringer and one 273-foot span through steel truss.
- Westwood — Providence Turnpike under tracks of New York, New Haven and Hartford Railroad; one 99-foot span, steel plate girder.
- Worthington — Huntington Road over Ward's Stream; one 8-foot span, reinforced concrete box culvert.

ALTERATIONS, REPAIRS AND EXTENSIONS TO BRIDGES AND STRUCTURES
MADE OR CONTRACTED FOR

- Billerica — At Wilmington line, Aqueduct bridge over Shawsheen River; extension to existing reinforced concrete arch, 21-foot span.
- Charlton — Southbridge Road over Cady Brook, Sta. 94; extension to reinforced concrete beam and slab, 17-foot span.
- Charlton — Southbridge Road over Cady Brook, Sta. 129; extension to reinforced concrete beam and slab, 20-foot span.
- Charlton — Southbridge Road over Cady Brook, Sta. 17; alteration of bridge fence.
- Dalton — Main Street over Housatonic River; steel bridge repainted.
- Egremont — Under Mountain Road over Guilder Brook; extension to reinforced concrete beam and slab, 24-foot span.
- Greenfield — At Montague line, Montague City Bridge over Connecticut River; repairs to trusses and roof.
- Hingham — Bridge at Otis and Summer Streets; repairs to existing concrete beams.
- Lee — Center Street bridge over Housatonic River; repainting steel.
- Needham — Greendale Avenue over tracks of New York, New Haven and Hartford Railroad; one 32-foot span, reinforced concrete arch extension.
- Newton — Worcester Turnpike over Charles River; extensions to two existing stone faced concrete arches; one 14-foot span and one 50-foot span.
- Newton — Worcester Turnpike over East Branch of Charles River; extension to stone faced concrete arch, 20-foot span.
- North Adams — Greylock Bridge over Hoosic River; repainting steel.
- Oakham — Athol Road over Brook; extension to reinforced concrete arch, 10-foot span.
- Oakham — Athol Road over Mill Pond; extension to reinforced concrete beam and slab, 24-foot span.
- Oxford — Charleston Road over French River; extension to reinforced concrete arch, 16-foot span.
- Pittsfield — Lebanon Avenue over West Branch Housatonic River; extension to reinforced concrete beam and slab, 30-foot span.
- Pittsfield — Hancock Road over Shaker Brook; extension to reinforced concrete beam and slab, 18-foot span.
- Pittsfield — Woodleigh Avenue over Brook; extension to reinforced concrete culvert, 8-foot span.
- Sandisfield — At Tolland line, State Line bridge over Farmington River; repainting steel.
- Sandisfield — Hanging Mountain bridge over Farmington River; repainting steel.
- Sheffield — Blodgett's bridge over Housatonic River; repainting steel.

- Shrewsbury — Boston Post Road over Brook; extension to reinforced concrete slab, 13-foot span.
- Southwick — South Longyard Road over Great Brook; extension to reinforced concrete slab, 11-foot span.
- Southwick — South Longyard Road over canal; extension to reinforced concrete slab, 8-foot span.
- Tewksbury — Main Street over Shawsheen River; extension to 2-span reinforced concrete beam and slab, 20-foot spans.
- Tyngsborough Bridge over Merrimack River and tracks of Boston & Maine Railroad; reinforced concrete hood over railroad tracks.
- Wareham — State highway over Weweantic River; extension to reinforced concrete beam and slab, 25-foot span.
- Wareham — State highway over Parker Mills Pond; extension to reinforced concrete beam and slab, 30-foot span.
- Worthington — Huntington Road over Little River; extension to reinforced concrete beam and slab, 28-foot span.
- Worthington — Huntington Road over Ward's Stream; extension to reinforced concrete beam and slab, 20-foot span.

CONTEMPLATED BRIDGES AND STRUCTURES

Plans, Studies or Estimates Made

Cities and Towns, Locality and Character of Structure.

- Arlington — Grade separation on Cambridge-Concord Highway at Pleasant Street.
- Attleboro — Washington Street over tracks of New York, New Haven and Hartford Railroad.
- Ayer — West Main Street over tracks of Boston and Maine Railroad.
- Belchertown — Cranby Road over tracks of Boston and Maine Railroad and tracks of Central Vermont Railroad. Bondsville Road over Reservoir Outlet, over canal, and over tracks of Boston and Maine Railroad.
- Boston — Viaduct over tracks of Midland Division of New York, New Haven and Hartford Railroad, Neponset River, and River Street connecting Neponset River Parkway with the proposed extension of Canterbury Street; grade separations on proposed Clarendon Hills Parkway at Hyde Park Avenue, over tracks of the New York, New Haven and Hartford Railroad, and Poplar Street. East Boston Tunnel Road over road and proposed tracks of Boston and Maine Railroad near Orient Heights. Grade separation at Huntington Avenue and the Riverway.
- Relocation of highway at Pauls Bridge over Neponset River.
- Brookline — Grade separation on Worcester Turnpike at Brookline Village and at Cypress Street.
- Cambridge — Traffic Circle at junction of Alewife Brook Parkway and Cambridge-Concord highway.
- Clarksburg — Extension to arch over Hoosic River.
- Cohasset — Proposed bridge over tracks of New York, New Haven and Hartford Railroad, near Black Rock Station.
- Colrain — Center bridge over East Branch of North River.
- Concord — Bridges on Cambridge-Concord highway over Concord River and over tracks of Boston and Maine Railroad.
- Conway — Bridges on Deerfield Road over Mill River.
- Dartmouth — At Westport Factory over Noquochoke Lake.
- Deerfield — Extensions to bridges on Conway Road over Mill River.
- Great Barrington — North Plain Road over Williams River.
- Hinsdale — Middlefield Road over Housatonic River.
- Lakeville — Taunton Road at Middleborough line over Poquay Trout Brook.

Lawrence — Salem Turnpike over Shawsheen River.

Lexington — Grade separation of proposed Cambridge-Concord highway and Waltham Street.

Lincoln — South Great Road over tracks of Boston and Maine Railroad.

Littleton — State highway over tracks of Boston and Maine Railroad.

Lynn — Point of Pines bridge over Saugus River at the Revere line.

Newbury — Newburyport Turnpike over tracks of Boston and Maine Railroad.

Newton — Worcester Turnpike over Hammond Pond Parkway.

Oxford — Webster Road under tracks of New York, New Haven and Hartford Railroad; Webster Road over Taft Brook.

Pittsfield — Lebanon Avenue over tracks of Boston and Albany Railroad and over Shaker Brook.

Quincy — Washington Street over Weymouth Fore River, at Weymouth line.

Raynham — Taunton Turnpike over Taunton River, over Haskins Brook and over Damlot Brook.

Revere — East Boston Tunnel Road over oil pipe corridor and over Revere Beach Parkway and Winthrop Avenue, over highway and tracks of Boston and Maine Railroad. Traffic Road at Point of Pines over tracks of Boston, Revere Beach and Lynn Railroad and private property. Highway under Parkway near Eliot Circle.

Templeton — Phillipston Road over Crow Hill Brook.

Waltham — Main Street over tracks of Boston and Maine Railroad at Beaver Brook Station.

Weymouth — Main Street over tracks of New York, New Haven and Hartford Railroad.

Winchester — Grade separation of highway and tracks of Boston and Maine Railroad.

Yarmouth — West Yarmouth Road over Parkers River.

Examinations, Reports, Estimates, etc., at Request of Counties, Cities and Towns

Amesbury — Chain Bridge over Merrimack River; examination and report of condition.

Amesbury — Essex-Merrimack Bridge over Merrimack River; examination and report of condition.

Amherst — Meadow Street Bridge, North Amherst; examination and estimate for a new bridge.

Ashland — Howe Street over Indian Brook; examination and estimate for a new bridge.

Bedford — Middlesex Turnpike over Shawsheen River; examination and advice on strength of bridge under construction.

Chester — Main Street over West Branch of Westfield River; examination and estimate of repairs to bridge.

Conway — Bardwell's Bridge over Deerfield River; examination and estimate for repairs.

Framingham — Herbert Street over Beaver Dam Brook; examination and estimate for reconstruction of bridge.

Gill — At Montague line over Connecticut River; examinations and advice on repairs to bridge.

Greenfield — Site of Smead Bridge; estimate for new bridge.

Millville — Central Street over Blackstone River; examination and estimate for new bridge.

*Examinations, Reports, Estimates, etc., by direction of the Department.
Cities and Towns, Locality and Subject.*

Boston — Commonwealth Pier heating plant; advice on boiler installation.

Boston — D Street garage of Department; investigation of floor design.

- Boston — New building for Public Works Department; investigation of design of basement floor.
- Colrain — Center Bridge over East Branch of North River; estimate for cost of reconstruction.
- Dighton — At the Taunton line over Three Mile River; estimate for widening bridge.
- Marshfield — State highway over South River; estimate for widening bridge.
- Newburyport — At the Salisbury line over Merrimack River; estimate for repairs to bridge.

Bridge Plans Submitted and Examined during the Year under the provisions of Chapter 85, General Laws, as amended by Chapter 313 of Acts of 1923.

- Athol — Reconstruction of bridge on Chestnut Street over Mill Brook; reinforced concrete arch, 13-foot span.
- Concord — Repairs and additions to the three-arch bridge on Elm Street over Concord River.
- Fall River — Extension of Third Street Bridge over Quequechan River.
- Haverhill — Reconstruction of Country Bridge over East Meadow Brook; one 17-foot span.
- Haverhill — Reconstruction of Brandy Brow Bridge over East Meadow Brook; one 12-foot span.
- Haverhill — Reconstruction of North Avenue Bridge over Snow's Brook; one 13-foot span.
- Hingham — At the Weymouth line; alterations to Back River Bridge.
- Pittsfield — Bridge on West Housatonic Street over Southwest Branch of Housatonic River; one 28-foot span, steel stringer with concrete floor.
- Winchendon — George M. Whitney Memorial Bridge over Millers River; two 24-foot spans and one 26-foot span, reinforced concrete arches.
- Worcester — Southbridge Street bridge over Blackstone River; two spans, steel stringer bridge.

Examinations, Studies, Estimates and Reports by direction of Acts and Resolves of the Legislature.

- Chapter 450, Acts of 1931, Section 8. This section of the Act directs the department of public works "to make surveys and prepare plans and estimates of cost of a grade separation by means of an overpass at the intersection of the Riverway and Huntington Avenue in the City of Boston". Preliminary plans and estimates have been made.
- Chapter 241, Acts of 1932. "An Act providing for the construction of a new bridge over the Saugus river between the Point of Pines in the city of Revere and the city of Lynn". Plans and specifications have been completed.
- Chapter 258, Acts of 1932, Section 1. This section directs the department to lay out and construct a state highway "including any necessary alterations to the bridge at Beach Street, crossing the tracks of said railroad", referring to the Boston and Maine Railroad. The contract for the work has been awarded and construction work has started.
- Chapter 302, Acts of 1932. "An Act authorizing the laying out of a State highway extending from Alewife Brook Parkway in the city of Cambridge westerly through said city and the towns of Arlington, Belmont, Lexington, Lincoln and Concord." Preliminary studies for bridges in Concord have been made.
- Chapter 25, Resolves of 1932. "Resolve providing for an investigation and study by the department of public works, of traffic conditions on a portion of the Fall River-New Bedford highway." The report has been filed with the clerk of the house of representatives.

Chapter 27, Resolves of 1932. "Resolve providing for an investigation by the department of public works relative to the advisability of further dredging Lynn Harbor and Saugus River and of widening draws in bridges over said river." The report has been filed with the clerk of the house of representatives.

Chapter 32, Resolves of 1932. "Resolves providing for the making and preparation by the department of public works of surveys, estimates, plans and specifications for the construction of a new high level bridge over the Weymouth Fore River between the city of Quincy and the town of Weymouth." The report has been filed with the clerk of the senate.

BRIDGE OVER THE MERRIMACK RIVER BETWEEN NEWBURYPORT AND SALISBURY

This bridge was placed in charge of the Massachusetts Highway Commission and made a State highway by the provisions of Chapter 716, Acts of 1912, which also provided that the expense of keeping the bridge in good repair for travel, of operating the draw and of maintaining the structure shall be paid by the Commonwealth.

The number of draw openings during the year ending Nov. 30, 1933, was 153. In 1932 the number of such openings was 220; in 1931 the number was 415; and in 1930 the number was 335.

The total expenditure during the year was \$11,350.43.

The total expenditure from 1912 to Nov. 30, 1933, inclusive, was \$189,812.11.

BRIDGE OVER TAUNTON RIVER BETWEEN FALL RIVER AND SOMERSET

This bridge was placed in charge of the Massachusetts Highway Commission and made a State highway by the provisions of Chapter 717, Acts of 1912, which also provided that the expense of keeping the bridge in good repair for travel, and for operating the draw and maintaining the structure shall be paid by the Commonwealth.

The number of draw openings during the year ending Nov. 30, 1933, was 1,602. In 1932 the number of such openings was 1,662; in 1931 the number was 1,700; and in 1930 the number was 1,812.

The total expenditure during the year was \$16,703.60.

The total expenditure from 1912 to Nov. 30, 1933, inclusive, was \$371,618.48.

BRIDGE OVER THE ACUSHNET RIVER BETWEEN CITY OF NEW BEDFORD AND THE TOWN OF FAIRHAVEN

This bridge, which was placed in charge of the Department of Public Works and made a State highway by the provisions of Chapter 406, Acts of 1930, which also provided that the expense of keeping the bridge in good repair for travel, operating the draw and of maintaining the structure shall be paid by the Commonwealth, was taken over by the Department on June 27, 1930.

The number of draw openings while in charge of the Department beginning June 27, 1930, and ending Nov. 30, 1932, was 1,069. In 1931 the number of such openings was 2,564; in 1932 the number was 2,384; and in 1933 the number was 1,867.

The total expenditure during the year was \$14,486.01.

The total expenditure while in charge of the Department has been \$65,491.00.

CONSTRUCTION OF TOWN AND COUNTY WAYS

(Section 34, Chapter 90, General Laws, as revised and amended.)

During the year the Department has contracted for work to be done in the towns/cities named in the following table, which also shows the type of road, the length contracted for, and the allotments or contributions by the State, towns/cities and counties:

COUNTIES AND TOWNS	State	CONTRIBUTIONS Town	County	TYPE OF ROAD	LENGTH CON- TRACTED FOR (FEET)
<i>Barnstable County</i>					
Bourne	\$30,000 00	—	—	Bituminous macadam	3,503
Orleans	5,000 00	2,500 00	2,500 00	Bituminous concrete	4,000
Orleans	6,000 00	3,000 00	3,000 00	Bituminous concrete	5,000
<i>Berkshire County</i>					
Adams	8,000 00	4,000 00	4,000 00	Stone and tar mixed in place	2,925
Alford	1,000 00	500 00	500 00	Gravel	800
Becket	3,000 00	1,500 00	1,500 00	Gravel	2,050
Becket	1,000 00	500 00	500 00	Gravel	575
Becket	1,000 00	500 00	500 00	Gravel	1,000
Cheshire	3,200 00	1,600 00	1,600 00	Gravel	2,150
Cheshire	500 00	—	—	Oiling	8,539
Clarksburg	2,000 00	1,000 00	1,000 00	Gravel	2,750
Egremont	3,200 00	1,600 00	1,600 00	{Stone retread {Gravel	1,765 2,500
Florida	4,000 00	4,000 00	—	Gravel	2,320
Great Barrington	15,000 00	10,000 00	5,000 00	Bituminous macadam	5,305
Hancock	32,500 00	1,250 00	5,000 00	Bituminous macadam	9,200
Hancock	1,000 00	350 00	—	Oiling	28,000
Hancock	1,000 00	500 00	—	Gravel	550
Hinsdale	3,000 00	500 00	1,000 00	Bridge	—
Lanesborough	4,000 00	2,000 00	2,000 00	Stone retread	2,100
Lee	2,000 00	1,000 00	1,000 00	Gravel	1,573
Lee	2,225 00	2,225 00	2,225 00	Bituminous macadam	901
Lenox	3,000 00	1,500 00	1,500 00	Gravel	1,700
Monterey	500 00	250 00	250 00	Gravel	375
Mount Washington	1,500 00	500 00	1,000 00	Gravel	1,350
New Ashford	400 00	200 00	200 00	Gravel	450
New Marlborough	1,000 00	500 00	500 00	Stone retread	2,500
New Marlborough	3,000 00	1,500 00	1,500 00	Stone retread	7,500
New Marlborough	2,000 00	1,000 00	1,000 00	Stone retread	5,000
Otis	2,000 00	500 00	1,000 00	Gravel	1,200
Otis	4,000 00	500 00	2,000 00	Gravel	1,800
Pittsfield	24,000 00	12,000 00	12,000 00	Bituminous macadam	9,899
Richmond	2,500 00	1,000 00	1,500 00	Gravel	2,150
Sandisfield	4,000 00	2,000 00	2,000 00	Gravel and stone retread	6,650
Sheffield	3,000 00	1,500 00	1,500 00	Gravel and stone retread	4,955
Sheffield	1,000 00	500 00	500 00	Gravel	1,000
Stockbridge	7,500 00	5,000 00	2,500 00	Bituminous macadam	2,000
Tyringham	3,000 00	2,000 00	1,000 00	Stone retread	1,850
Washington	4,000 00	2,000 00	2,000 00	Gravel	2,200
West Stockbridge	6,000 00	3,000 00	3,000 00	Gravel	4,600
Williamstown	3,000 00	3,000 00	—	Gravel	1,564
Windsor	1,000 00	500 00	500 00	Gravel	750
Windsor	1,000 00	500 00	500 00	Gravel	650
<i>Bristol County</i>					
Berkley	2,000 00	1,000 00	1,000 00	Gravel	1,000
Berkley	1,000 00	1,000 00	—	Oiling	47,300
Easton	6,000 00	6,000 00	—	Gravel	2,080
Freetown	1,000 00	1,000 00	—	Oiling	68,300
Rehoboth	5,150 00	2,575 00	2,575 00	Bituminous macadam	2,303
Rehoboth	2,850 00	1,425 00	1,425 00	Gravel	2,600
Westport	2,500 00	2,500 00	—	Repair bridge	—
<i>Dukes County</i>					
Chilmark	250 00	125 00	125 00	Bituminous concrete	115
Oak Bluffs	17,584 14	10,000 00	14,915 86	Bituminous concrete	11,000
Tisbury	21,800 00	10,900 00	—	Bituminous concrete	3,825
<i>Essex County</i>					
Amesbury	500 00	500 00	—	Oiling	17,350
Amesbury	6,000 00	6,000 00	—	Bituminous macadam	2,238
Boxford	1,000 00	1,000 00	—	Oiling	31,000
Boxford	14,400 00	1,600 00	—	Gravel and tar mixed in place	5,800
Georgetown	1,500 00	1,500 00	—	Gravel	1,500
Gloucester	5,000 00	5,000 00	—	Bituminous macadam	2,800
Haverhill	30,000 00	30,000 00	—	Bituminous macadam	20,918
*Marblehead	12,000 00	12,000 00	—	Bituminous macadam	4,622
Merrimac	2,000 00	2,000 00	—	Gravel	3,700
Merrimac	1,000 00	—	—	Gravel	800
Merrimac	500 00	500 00	—	Gravel	2,150
Methuen	6,500 00	6,500 00	—	Bituminous macadam	5,600
Middleton	500 00	500 00	—	Grading and drainage	10,700
Middleton	500 00	500 00	—	Grading and drainage	6,570
Nahant	1,500 00	1,500 00	—	Oiling	12,144
Rowley	500 00	500 00	—	Oiling	11,000

COUNTIES AND TOWNS	State	CONTRIBUTIONS Town	County	TYPE OF ROAD	LENGTH CON- TRACTED FOR (FEET)
Salisbury	16,000 00	—	—	Bituminous macadam	1,065
Salisbury	3,500 00	3,500 00	—	Broken stone and tar mixed in place	2,700
*Ipswich	1,500 00	1,500 00	—	Oiling	40,950
West Newbury	900 00	900 00	—	Oiling	8,448
<i>Franklin County</i>					
Ashfield	1,000 00	1,000 00	—	Gravel	900
Ashfield	2,000 00	1,000 00	1,000 00	Gravel	1,300
Ashfield	4,000 00	—	—	Repair and oiling	6,000
Ashfield	5,300 00	240 00	—	Oiling	31,680
Buckland	6,000 00	5,000 00	1,000 00	Gravel	6,000
Charlemont	2,000 00	1,000 00	1,000 00	Stone retread	3,500
Colrain	16,000 00	6,500 00	—	Gravel and tar	1,250
Colrain	2,000 00	1,000 00	1,000 00	Bituminous macadam	1,000
Conway	3,000 00	2,000 00	1,000 00	Gravel	2,400
Deerfield	3,000 00	2,000 00	1,000 00	Bituminous macadam	1,400
Erving	2,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	2,300
Gill	2,965 00	670 00	—	Oiling	35,376
Gill	2,000 00	1,000 00	1,000 00	Gravel	1,350
Greenfield	2,600 00	1,600 00	1,000 00	Stone retread	2,157
Greenfield	1,250 00	2,500 00	1,250 00	Bridge	—
Hawley	1,000 00	500 00	500 00	Gravel	600
Hawley	1,000 00	500 00	500 00	Gravel	1,500
Heath	2,000 00	1,000 00	1,000 00	Gravel	1,800
Leverett	2,000 00	1,000 00	1,000 00	Oiling	16,896
Leyden	2,000 00	1,000 00	1,000 00	Bituminous macadam	1,000
Monroe	1,000 00	500 00	500 00	Gravel and tar mixed in place	3,500
Montague	8,000 00	7,000 00	1,000 00	Bituminous macadam	2,975
New Salem	3,000 00	2,000 00	1,000 00	Oiling	49,104
New Salem	2,000 00	1,000 00	—	Gravel	1,650
Northfield	2,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	4,500
Orange	1,000 00	1,000 00	—	Gravel and tar	6,000
Orange	21,000 00	8,000 00	1,000 00	Bituminous macadam	2,400
Orange	400 00	320 00	—	Oiling	7,392
Rowe	2,000 00	1,000 00	1,000 00	Gravel	1,200
Shelburne	1,000 00	1,000 00	—	Bituminous macadam	1,000
Shelburne	2,000 00	1,500 00	500 00	Gravel	240
Shutesbury	2,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	3,000
Sunderland	4,000 00	1,000 00	1,000 00	Grading and drainage	3,800
Warwick	2,000 00	1,000 00	1,000 00	Gravel	1,400
Warwick	1,200 00	1,200 00	—	Gravel	500
Warwick	3,800 00	400 00	—	Oiling	43,824
Wendell	1,500 00	1,500 00	—	Oiling	21,648
Wendell	4,000 00	3,000 00	1,000 00	Gravel	3,000
<i>Hampden County</i>					
Agawam	7,500 00	5,000 00	2,500 00	Bituminous macadam	2,800
Blandford	3,000 00	1,700 00	1,700 00	Gravel	2,500
Brimfield	500 00	500 00	500 00	Oiling	27,296
Brimfield	3,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	1,132
Brimfield	1,500 00	1,000 00	500 00	Grading and drainage	2,837
Chester	5,000 00	800 00	4,000 00	Gravel and stone retread	3,220
Chester	5,000 00	800 00	4,000 00	Gravel and stone retread	5,200
Chester	1,100 00	300 00	400 00	Bituminous macadam and bridge repair	400
Chester	7,000 00	—	1,000 00	Stone retread	11,500
Chester	1,600 00	500 00	1,100 00	Stone retread	2,400
Chicopee	32,500 00	20,000 00	12,500 00	Bituminous macadam	7,690
East Longmeadow	5,000 00	2,000 00	3,000 00	Bituminous macadam	3,000
East Longmeadow	500 00	500 00	500 00	Gravel and tar mixed in place	4,400
Granville	8,000 00	2,000 00	5,000 00	Bituminous macadam	6,000
Granville	800 00	473 00	—	Oiling	10,560
Hampden	3,000 00	1,400 00	2,200 00	Bituminous macadam	1,550
Hampden	5,000 00	1,400 00	3,000 00	Bituminous macadam	3,000
Hampden	400 00	400 00	400 00	Oiling	4,752
Holland	4,060 00	1,000 00	3,200 00	Gravel and tar mixed in place	2,050
Holland	500 00	500 00	500 00	Oiling	18,200
Longmeadow	20,000 00	16,000 00	10,000 00	Bituminous macadam	11,112
Ludlow	8,000 00	4,000 00	4,000 00	Bituminous macadam	4,000
Monson	4,000 00	2,000 00	2,000 00	Gravel and tar mixed in place	2,050
Montgomery	5,000 00	1,000 00	3,000 00	Gravel	3,000
Palmer	1,000 00	1,000 00	1,000 00	Oiling	22,651
Palmer	5,000 00	1,000 00	2,000 00	Tar macadam mixed in place	3,450
Southwick	4,000 00	1,500 00	2,000 00	Bituminous macadam	2,000
Southwick	1,600 00	330 00	—	Oiling	21,813
Springfield	20,000 00	10,000 00	10,000 00	Bituminous macadam	4,155
Tolland	6,000 00	2,000 00	3,000 00	Bituminous macadam	11,635
Wales	3,000 00	1,000 00	2,000 00	Gravel and tar mixed in place	1,800
Wales	250 00	250 00	250 00	Oiling	7,000
West Springfield	12,000 00	6,000 00	6,000 00	Bituminous macadam	3,358
West Springfield	9,000 00	6,000 00	3,000 00	Bituminous macadam	2,328
Westfield	6,000 00	4,000 00	2,000 00	Bituminous macadam	4,300
Westfield	2,700 00	1,800 00	900 00	Bituminous macadam	1,700
Westfield	1,500 00	1,000 00	500 00	Bituminous macadam	4,300

COUNTIES AND TOWNS	CONTRIBUTIONS			TYPE OF ROAD	LENGTH CON-TRACTED FOR (FEET)
	State	Town	County		
Westfield	4,000 00	2,000 00	2,000 00	Bridge	—
Wilbraham	4,000 00	900 00	2,400 00	Bituminous macadam	2,312
<i>Hampshire County</i>					
Amherst	12,000 00	8,000 00	4,000 00	Bituminous macadam	5,935
Belchertown	16,250 00	3,750 00	5,000 00	Bituminous macadam	6,550
Belchertown	1,100 00	96 00	—	Oiling	12,919
Chesterfield	1,500 00	750 00	750 00	Gravel	1,080
Chesterfield	2,700 00	150 00	—	Oiling	31,680
Chesterfield	500 00	250 00	250 00	Gravel	450
Chesterfield	1,000 00	500 00	500 00	Gravel	800
Cummington	1,000 00	500 00	500 00	Gravel	500
Cummington	3,000 00	1,500 00	1,500 00	Gravel	2,200
Cummington	800 00	37 00	—	Oiling	7,800
Enfield	1,000 00	500 00	500 00	Oiling	20,064
Enfield	1,050 00	88 00	—	Gravel	800
Goshen	1,000 00	500 00	500 00	Gravel	500
Goshen	1,000 00	500 00	500 00	Gravel	700
Goshen	1,000 00	45 00	—	Oiling	9,400
Granby	2,000 00	1,000 00	2,000 00	Bituminous macadam	1,850
Granby	2,000 00	1,000 00	—	Oiling	16,368
Greenwich	750 00	750 00	—	Oiling	17,424
Huntington	4,200 00	1,000 00	1,000 00	Gravel	1,050
Huntington	1,800 00	1,000 00	1,000 00	Gravel and stone retread	1,800
Middlefield	400 00	200 00	200 00	Gravel	275
Middlefield	4,000 00	1,000 00	1,000 00	Gravel	2,100
Middlefield	400 00	200 00	200 00	Gravel	200
Northampton	7,000 00	5,000 00	2,000 00	Bituminous macadam	5,463
Pelham	1,000 00	500 00	500 00	Gravel	1,000
Pelham	6,800 00	1,200 00	2,000 00	Bituminous macadam	3,550
Plainfield	8,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	900
Plainfield	2,000 00	300 00	300 00	Gravel and tar mixed in place	1,000
Plainfield	9,000 00	77 00	—	Repairs and oiling	27,456
South Hadley	750 00	500 00	500 00	Gravel	100
Southampton	8,000 00	4,000 00	4,000 00	Repairs	200
Ware	4,000 00	2,000 00	2,000 00	Gravel and stone mixed in place with tar	600
Westhampton	1,500 00	750 00	750 00	Oiling	2,670
Williamsburg	700 00	165 00	—	Gravel	1,200
Williamsburgh	16,000 00	2,500 00	500 00	Oiling	11,600
Worthington	2,000 00	1,000 00	1,000 00	Bituminous macadam and bridge	900
Worthington	1,000 00	500 00	500 00	Gravel	925
Worthington	1,000 00	500 00	500 00	Gravel	650
Worthington	1,000 00	500 00	500 00	Gravel	400
<i>Middlesex County</i>					
Acton	3,750 00	2,500 00	1,250 00	Gravel and tar	4,100
Acton	2,000 00	2,000 00	2,000 00	Oiling	89,232
Arlington	7,000 00	3,500 00	3,500 00	Drainage	6,838
Arlington	15,000 00	7,500 00	7,500 00	Bituminous concrete	6,838
Ashby	1,000 00	500 00	1,000 00	Oiling	17,952
Ashland	1,000 00	1,000 00	1,000 00	Oiling	23,232
Ashland	1,000 00	600 00	400 00	Gravel	900
Ayer	1,500 00	1,500 00	1,500 00	Oiling	46,094
Ayer	3,750 00	2,500 00	1,250 00	Gravel	1,936
Ayer	2,500 00	2,500 00	2,500 00	Bridge repairs	—
Bedford	1,000 00	1,000 00	1,000 00	Oiling	46,464
Bedford	200 00	200 00	200 00	Bridge repairs	—
Belmont	7,000 00	5,000 00	2,000 00	Bituminous macadam	1,336
Billerica	5,600 00	4,000 00	1,600 00	Gravel and tar	4,200
Billerica	5,600 00	4,000 00	1,600 00	Gravel and tar	4,200
Billerica	7,000 00	5,000 00	2,000 00	Bridge and approaches	—
Billerica	3,000 00	3,000 00	3,000 00	Oiling	71,808
Boxborough	750 00	750 00	750 00	Oiling	37,488
Boxborough	1,500 00	500 00	500 00	Gravel	1,500
Burlington	2,500 00	2,500 00	1,000 00	Oiling	59,136
Burlington	4,500 00	3,000 00	1,500 00	Gravel and tar	3,800
Burlington	3,000 00	2,000 00	1,000 00	Gravel	3,000
Carlisle	4,000 00	1,500 00	2,000 00	Gravel	3,700
Carlisle	1,000 00	1,000 00	1,000 00	Oiling	64,944
Chelmsford	2,000 00	2,000 00	2,000 00	Oiling	78,672
Chelmsford	4,000 00	4,000 00	4,000 00	Bituminous concrete	2,170
Concord	15,000 00	10,000 00	5,000 00	Bituminous macadam	8,886
Dracut	1,000 00	1,000 00	1,000 00	Oiling	51,216
Dracut	4,500 00	3,000 00	1,500 00	Gravel	5,600
Dunstable	1,750 00	1,750 00	1,750 00	Oiling	49,104
Dunstable	3,000 00	1,000 00	1,000 00	Oiling	42,240
Framingham	18,000 00	12,000 00	6,000 00	Bituminous macadam	5,636
Groton	3,500 00	3,500 00	3,500 00	Oiling	48,048
Groton	10,000 00	4,000 00	6,000 00	Gravel	7,500
Holliston	1,500 00	1,500 00	1,500 00	Oiling	46,992
Hopkinton	9,000 00	3,000 00	3,000 00	Grading	3,080
				Bituminous macadam	2,400
				Bridge	—

COUNTIES AND TOWNS	CONTRIBUTIONS		TYPE OF ROAD	LENGTH CON-TRACTED FOR (FEET)
	State	Town		
Hopkinton	1,000 00	1,000 00	1,000 00	Oiling 66,528
Hudson	37,500 00	25,000 00	12,500 00	Bituminous macadam 15,478
Lexington	5,000 00	5,000 00	—	Gravel and asphalt 5,300
Lincoln	2,500 00	2,500 00	2,500 00	Oiling 36,960
Littleton	1,800 00	1,800 00	1,800 00	Oiling 51,216
Littleton	1,300 00	900 00	500 00	Gravel 1,500
Littleton	1,300 00	900 00	500 00	Gravel 2,000
Lowell	30,000 00	30,000 00	—	Bituminous macadam 7,605
Malden	20,000 00	25,000 00	5,000 00	Bituminous macadam 3,870
Marlborough	9,000 00	9,000 00	—	Bituminous macadam 1,805
Melrose	8,000 00	4,000 00	—	Gravel 2,500
Natick	1,000 00	1,000 00	1,000 00	Oiling 56,496
Natick	3,000 00	3,000 00	—	Bituminous macadam 1,220
North Reading	2,000 00	2,000 00	2,000 00	Oiling 52,272
North Reading	4,500 00	3,000 00	1,500 00	Bituminous macadam 3,650
Pepperell	3,000 00	3,000 00	3,000 00	Oiling 62,336
Pepperell	3,000 00	2,000 00	1,000 00	Gravel 5,000
Reading	12,000 00	8,000 00	4,000 00	Bituminous macadam 900
Sherborn	13,000 00	5,000 00	7,000 00	Gravel 12,360
Sherborn	5,000 00	2,000 00	3,000 00	Bituminous macadam 5,914
Sherborn	2,000 00	2,000 00	2,000 00	Gravel 5,850
Shirley	1,500 00	1,500 00	1,500 00	Oiling 71,280
Stoneham	15,000 00	10,000 00	5,000 00	Oiling 51,216
Stow	1,200 00	1,200 00	1,200 00	Bituminous macadam 3,692
Sndbury	3,000 00	3,000 00	3,000 00	Oiling 41,184
Tewksbury	2,500 00	1,500 00	1,000 00	Oiling 79,728
Tewksbury	1,000 00	1,000 00	1,000 00	Gravel 3,500
Tewksbury	4,200 00	2,800 00	1,400 00	Oiling 35,640
Townsend	2,000 00	2,000 00	2,000 00	Bituminous macadam 1,500
Townsend	3,500 00	1,000 00	1,500 00	Oiling 32,736
Tyngsborough	2,000 00	2,000 00	2,000 00	Gravel 2,250
Tyngsborough	3,000 00	1,000 00	1,000 00	Oiling 73,360
Tyngsborough	3,000 00	1,000 00	1,000 00	Gravel 2,600
Tyngsborough	3,000 00	1,000 00	1,000 00	Gravel 2,700
Tyngsborough	3,000 00	1,000 00	1,000 00	Gravel 2,700
Wakefield	11,800 00	7,800 00	4,000 00	Bituminous macadam and bituminous concrete 7,600
Waltham	500 00	500 00	500 00	Bituminous macadam 400
Watertown	9,000 00	4,500 00	4,500 00	Bituminous macadam 1,590
Wayland	3,000 00	3,000 00	3,000 00	Oiling 48,576
Wayland	6,000 00	6,000 00	3,000 00	Bituminous macadam 2,400
Westford	5,000 00	5,000 00	5,000 00	Oiling 118,272
Westford	1,500 00	1,000 00	500 00	Gravel 2,000
Westford	1,500 00	500 00	1,000 00	Gravel 1,530
Westford	3,000 00	2,000 00	1,000 00	Gravel 2,500
Westford	4,000 00	1,000 00	2,000 00	Gravel 3,355
Wilmington	3,000 00	2,000 00	1,000 00	Gravel 3,000
Wilmington	1,000 00	1,000 00	1,000 00	Oiling 32,208
Winchester	32,500 00	32,500 00	—	Bituminous concrete 9,740
<i>Norfolk County</i>				
Bellingham	2,650 00	—	1,325 00	Oiling 52,000
Foxborough	4,000 00	2,000 00	—	Gravel 1,095
Foxborough	7,000 00	7,000 00	—	Gravel and tar mixed in place 4,200
Franklin	10,000 00	10,000 00	—	Gravel and tar 6,500
Medfield	1,000 00	1,000 00	1,000 00	Oiling 9,720
Medway	1,000 00	1,000 00	1,000 00	Oiling —
Millis	1,000 00	1,000 00	1,000 00	Oiling 10,300
Needham	9,000 00	9,000 00	—	Bituminous macadam 3,950
Norfolk	1,200 00	1,200 00	1,200 00	Oiling 51,163
Norfolk	600 00	300 00	300 00	Gravel 518
Walpole	2,500 00	2,500 00	—	Oiling 12,000
Walpole	2,000 00	2,000 00	—	Gravel stone 1,500
Walpole	2,000 00	2,000 00	—	Gravel stone and tar 1,650
Weymouth	15,000 00	15,000 00	—	Bituminous concrete 3,930
Wrentham	1,800 00	900 00	—	Gravel 291
Wrentham	4,000 00	4,000 00	—	Gravel and tar mixed in place 2,500
Wrentham	4,000 00	4,000 00	—	Gravel 2,000
<i>Plymouth County</i>				
Bridgewater	2,000 00	2,000 00	—	Gravel and bituminous ma- cadam 5,000
Bridgewater	2,000 00	2,000 00	—	Gravel 4,318
Brocton	22,500 00	22,500 00	—	Bituminous macadam 9,160
Carver	2,000 00	2,000 00	—	Gravel and tar mixed in place 2,800
Hanover	7,500 00	3,750 00	3,750 00	Gravel and tar 8,300
Lakeville	1,500 00	750 00	750 00	Oiling 6,358
Marion	2,000 00	2,000 00	—	Gravel and tar mixed in place 2,000
Middleborough	1,000 00	1,000 00	1,000 00	Oiling 18,746
Pembroke	4,000 00	2,500 00	1,500 00	Gravel and tar mixed in place 4,880
Rockland	12,000 00	6,000 00	6,000 00	Bituminous macadam 5,000
West Bridgewater	3,000 00	1,500 00	1,500 00	Bituminous macadam 1,532
West Bridgewater	3,000 00	1,500 00	1,500 00	Gravel 4,600

COUNTIES AND TOWNS

COUNTIES AND TOWNS	CONTRIBUTIONS			TYPE OF ROAD	LENGTH CON-TRACTED FOR (FEET)
	State	Town	County		
Worcester County					
Ashburnham	1,000 00	750 00	1,000 00	Oiling	39,350
Athol	1,500 00	1,500 00	1,500 00	Oiling	32,512
Auburn	15,000 00	10,000 00	5,000 00	{Stone and tar mixed in place {Gravel and tar mixed in place	3,275 4,600
Barre	6,000 00	5,000 00	4,000 00	Gravel and tar mixed in place and bridge	4,430
Barre	1,200 00	1,200 00	1,200 00	Gravel and tar mixed in place	1,350
Barre	300 00	300 00	300 00	Oiling	7,824
Berlin	8,000 00	3,500 00	4,000 00	Gravel and tar mixed in place	1,995
Berlin	2,500 00	1,000 00	2,500 00	Oiling	34,830
Blackstone	4,000 00	3,000 00	2,000 00	Broken stone and tar mixed in place	4,100
Blackstone	1,500 00	1,000 00	500 00	Gravel and tar mixed in place	1,800
Blackstone	1,000 00	1,000 00	1,000 00	Oiling	23,472
Bolton	15,000 00	2,000 00	5,000 00	Bituminous macadam	5,700
Bolton	1,000 00	500 00	1,000 00	Oiling	43,929
Boylston	4,000 00	1,000 00	2,000 00	Oiling	—
Boylston	11,000 00	3,000 00	7,000 00	Gravel and tar mixed in place	5 897
Boylston	2,000 00	1,000 00	2,000 00	Oiling	48,338
Brookfield	3,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	1,700
Brookfield	1,000 00	500 00	1,000 00	Oiling	21,400
Charlton	3,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	1,900
Charlton	500 00	200 00	500 00	Oiling	22,030
Clinton	10,000 00	—	—	Bituminous macadam	1,500
Dana	2,600 00	500 00	1,000 00	Gravel	900
Dana	2,500 00	1,000 00	2,500 00	Oiling	61,491
Douglas	4,500 00	2,000 00	2,500 00	Gravel and tar mixed in place	4 400
Dudley	9,000 00	5,000 00	4,000 00	Gravel and tar mixed in place	10,190
East Brookfield	2,500 00	1,000 00	1,500 00	Grading and bridge	1,550
East Brookfield	2,000 00	800 00	1,200 00	Grading and drainage	1 200
Grafton	2,000 00	2,000 00	2,000 00	Oiling	27,047
Hardwick	3,600 00	1,400 00	2,600 00	Bituminous macadam	1 596
Hardwick	1,300 00	1,300 00	1,300 00	Oiling	55,704
Harvard	2,000 00	1,000 00	2,000 00	Oiling	46,547
Holden	500 00	500 00	500 00	Oiling	34,048
Holden	5,000 00	3,000 00	2,000 00	Gravel and tar mixed in place	2,770
Hubbardston	1,000 00	500 00	1,000 00	Gravel and tar mixed in place	1,050
Hubbardston	6,000 00	2,000 00	2,000 00	Gravel and tar mixed in place	1 800
Hubbardston	1,400 00	700 00	1,400 00	Oiling	55,668
Leicester	4,000 00	1,500 00	2,000 00	Gravel and tar mixed in place	2,050
Lunenburg	1,000 00	500 00	1,000 00	Oiling	30,429
Mendon	1,100 00	500 00	1,100 00	Oiling	34,600
Mendon	4,600 00	1,100 00	2,000 00	Gravel and tar mixed in place	2,950
Milford	6,000 00	4,000 00	2,000 00	Bituminous macadam	2,690
Millville	3,000 00	—	3,000 00	Gravel and tar mixed in place	761
New Braintree	2,000 00	750 00	1,000 00	Gravel and tar mixed in place and bridge	750 39,109
New Braintree	1,000 00	500 00	1,000 00	Oiling	—
North Brookfield	4,000 00	2,000 00	1,500 00	Gravel and tar mixed in place and bridge	2,300 5,341
North Brookfield	200 00	200 00	200 00	Oiling	—
Northbridge	6,000 00	5,000 00	4,000 00	Gravel and tar mixed in place	4,600
Northbridge	2,000 00	1,500 00	4,000 00	Bituminous macadam	2 515
Northbridge	3,000 00	2,000 00	1,000 00	Gravel and tar mixed in place	1,900
Northbridge	1,000 00	1,000 00	1,000 00	Gravel and tar mixed in place	2,100
Oakham	5,000 00	2,000 00	3,000 00	Oiling	9,300
Oakham	1,100 00	800 00	1,100 00	Gravel	5,000
Oxford	1,150 00	750 00	1,150 00	Oiling	28,809
Paxton	5,000 00	2,000 00	3,000 00	Oiling	34,918
Paxton	1,200 00	600 00	1,200 00	Gravel	3,800
Petersham	1,500 00	1,500 00	1,500 00	Oiling	15,470
Petersham	4,000 00	1,500 00	2,000 00	Oiling	37,563
Phillipston	4,500 00	1,000 00	2,000 00	Gravel and tar mixed in place	8 450
Phillipston	4,500 00	1,000 00	4,500 00	Gravel and tar mixed in place	7,250
Phillipston	500 00	500 00	500 00	Gravel and tar mixed in place	3,600
Princeton	4,000 00	1,500 00	2,000 00	Oiling	34,100
Princeton	2,000 00	1,000 00	2,000 00	Grading and bridge	949
Royalston	1,500 00	500 00	500 00	Oiling	70,980
Royalston	3,200 00	1,800 00	2,000 00	Gravel	19,430
Rutland	3,000 00	1,250 00	2,000 00	Oiling	50,637
Rutland	600 00	600 00	600 00	Gravel and tar mixed in place	1,860
Rutland	1,200 00	600 00	1,200 00	Gravel	2,815
Shrewsbury	15,000 00	10,000 00	5,000 00	Oiling	45,062
Southborough	1,700 00	1,700 00	1,700 00	Stone and tar mixed in place	625
Southborough	300 00	300 00	300 00	Gravel and tar mixed in place	7,075
Southbridge	15,000 00	10,000 00	5,000 00	Bituminous macadam and bridge	614
Spencer	6,000 00	2,500 00	4,000 00	Oiling	13,860
Spencer	500 00	500 00	500 00	Bituminous macadam	5,250
Spencer	—	—	—	Gravel and tar mixed in place	4,700
Spencer	—	—	—	Oiling	25,238

COUNTIES AND TOWNS	CONTRIBUTIONS			TYPE OF ROAD	LENGTH CONTRACTED FOR (FEET)
	State	Town	County		
Sterling	4,500 00	2,000 00	3,500 00	Gravel and tar mixed in place	5,850
Sterling	4,500 00	2,000 00	3,500 00	Gravel and tar mixed in place	3,685
Sterling	2,000 00	1,000 00	2,000 00	Oiling	61,411
Sturbridge	2,000 00	1,000 00	2,000 00	Gravel and tar mixed in place	2,000
Sutton	5,000 00	2,000 00	5,000 00	Gravel and tar mixed in place	4,450
Sutton	1,200 00	600 00	1,200 00	Oiling	28,979
Sutton	5,000 00	500 00	5,000 00	Gravel and tar mixed in place	6,200
Templeton	4,000 00	3,000 00	2,000 00	Gravel and tar mixed in place	4,200
Templeton	1,000 00	1,000 00	1,000 00	Oiling	40,347
Upton	5,000 00	2,000 00	3,000 00	Gravel and tar mixed in place	3,251
Upton	5,000 00	2,000 00	3,000 00	(Gravel and tar mixed in place	3,750
Upton)Grading	3,800
Upton	1,000 00	500 00	1,000 00	Oiling	8,450
Uxbridge	5,000 00	4,000 00	3,000 00	Gravel and tar mixed in place	6,500
Uxbridge	750 00	500 00	250 00	Oiling	5,280
Uxbridge	7,000 00	6,000 00	5,000 00	Gravel and tar mixed in place	6,100
Warren	800 00	400 00	800 00	Oiling	16,675
West Boylston	5,000 00	2,000 00	3,000 00	Gravel and tar mixed in place	5,000
West Boylston	1,000 00	800 00	1,000 00	Oiling	26,863
West Brookfield	3,000 00	1,000 00	2,000 00	Gravel and asphalt emulsion mixed in place	4,200
West Brookfield	400 00	200 00	400 00	Oiling	8,525
Westborough	800 00	800 00	800 00	Oiling	39,960
Westminster	4,500 00	1,500 00	3,000 00	Gravel and tar mixed in place	8,955
Westminster	2,000 00	750 00	1,000 00	Gravel and tar mixed in place	1,566
Westminster	2,000 00	1,000 00	2,000 00	Oiling	49,772
Winchendon	1,200 00	600 00	1,200 00	Oiling	19,537

EXPENDITURES FOR CONSTRUCTION OF TOWN AND COUNTY WAYS

The expenditures during the year in various counties were:—

Barnstable, \$52,045.32	Hampshire, \$194,738.41
Berkshire, \$273,782.05	Middlesex, \$437,445.93
Bristol, \$22,540.35	Norfolk, \$69,591.17
Dukes, \$28,561.01	Plymouth, \$65,064.97
Essex, \$117,307.82	Worcester, \$361,846.58
Franklin, \$143,373.26	Total, \$1,968,729.01
Hampden, \$202,432.14	

Details of the foregoing expenditures follow:—

Barnstable County.—Bourne, \$36,605.18; Mashpee, \$1,885.83; Orleans, \$13,554.31.

Berkshire County.—Adams, \$7,699.27; Alford, \$2,033.37; Becket, \$6,469.11; Cheshire, \$6,866.04; Clarksburg, \$2,463.82; Egremont, \$3,943.07; Florida, \$4,928.83; Great Barrington, \$18,317.09; Hancock, \$39,742.23; Hinsdale, \$5,668.43; Lanesboro, \$6,269.91; Lee, \$6,949.05; Lenox, \$3,696.63; Monterey, \$614.37; Mt. Washington, \$1,848.07; New Ashford, \$492.65; New Marlboro, \$7,433.59; Otis, \$7,393.26; Peru, \$7,033.17; Pittsfield, \$29,163.52; Richmond, \$3,080.53; Sandisfield, \$4,928.84; Savoy, \$35,269.00; Sheffield, \$4,928.84; Stockbridge, \$9,931.27; Tyringham, \$4,066.29; Washington, \$4,928.61; West Stockbridge, \$9,848.42; Williamstown, \$25,310.74; Windsor, \$2,464.03.

Bristol County.—Berkley, \$3,955.25; Dartmouth, \$1,032.10; Easton, \$5,914.61; Freetown, \$1,232.21; Rehoboth, \$9,484.09; Swansea, \$922.09.

Dukes County.—Chilmark, \$267.20; Oak Bluffs, \$21,956.17; Tisbury, \$6,337.64.

Essex County.—Amesbury, \$7,929.25; Boxford, \$15,497.85; Georgetown, \$1,848.32; Gloucester, \$6,161.05; Haverhill, \$32,886.42; Ipswich, \$1,848.32; Marblehead, \$12,561.50; Merrimac, \$4,312.74; Methuen, \$6,432.74; Middleton, \$1,232.21; Nahant, \$1,848.28; Rowley, \$616.11; Salisbury, \$23,024.16; West Newbury, \$1,108.87.

Franklin County.—Ashfield, \$15,151.06; Buckland, \$7,393.26; Charlemont, \$2,464.42; Colrain, \$16,957.49; Conway, \$3,696.52; Deerfield, \$3,696.63; Erving, \$2,675.56; Gill, \$6,117.93; Greenfield, \$6,503.98; Hawley, \$2,464.42; Heath, \$2,464.42; Leverett, \$2,464.42; Leyden, \$2,464.42; Monroe, \$1,232.21; Montague, \$11,200.02; New Salem, \$6160.93; North-

field, \$2,464.42; Orange, \$21,308.72; Rowe, \$2,464.42; Shelburne, \$1,-232.21; Shutesbury, \$2,464.42; Sunderland, \$4,928.84; Warwick, \$8,-625.38; Wendell, \$6,777.16.

Hampden County.—Agawam, \$3,149.03; Blandford, \$5,048.58; Brimfield, \$6,143.50; Chester, \$24,244.45; Chicopee, \$14,495.87; East Longmeadow, \$6,777.16; Granville, \$12,327.16; Hampden, \$10,349.25; Holland, \$5,768.37; Longmeadow, \$11,768.87; Ludlow, \$7,622.27; Monson, \$3,-557.31; Montgomery, \$6,160.31; Palmer, \$4,168.29; Southwick, \$10,767.97; Springfield, \$17,063.47; Tolland, \$7,393.26; Wales, \$3,523.30; Westfield, \$17,497.39; West Springfield, \$17,834.15; Wilbraham, \$6,772.18.

Hampshire County.—Amherst, \$13,348.30; Belchertown, \$55,584.27; Chesterfield, \$7,020.52; Cummington, \$6,129.40; Enfield, \$2,526.03; Goshen, \$3,696.63; Granby, \$4,928.84; Greenwich, \$924.16; Huntington, \$7,146.82; Middlefield, \$10,589.56; Northampton, \$8,625.47; Pelham, \$11,-338.93; Plainfield, \$23,637.26; Southampton, \$5,878.83; South Hadley, \$1,564.22; Ware, \$4,928.84; Westhampton, \$9,241.58; Williamsburg, \$11,-585.50; Worthington, \$6,043.25.

Middlesex County.—Acton, \$7,085.21; Arlington, \$26,083.18; Ashby, \$1,232.21; Ashland, \$2,463.73; Ayer, \$6,646.84; Bedford, \$1,478.65; Belmont, \$11,313.34; Billerica, \$22,368.41; Boxboro, \$2,772.48; Burlington, \$11,335.38; Carlisle, \$5,175.25; Chelmsford, \$7,293.86; Concord, \$14,-828.80; Dracut, \$6,777.16; Dunstable, \$4,280.43; Framingham, \$21,-460.23; Groton, \$12,519.59; Holliston, \$1,868.68; Hopkinton, \$7,208.22; Hudson, \$40,352.57; Lexington, \$5,853.00; Lincoln, \$2,248.78; Littleton, \$5,421.49; Lowell, \$640.85; Malden, \$11,974.50; Marlboro, \$4,436.10; Melrose, \$1,330.49; Natick, \$4,922.43; No. Reading, \$8,009.30; Pepperell, \$7,393.26; Reading, \$11,424.63; Sherborn, \$26,643.44; Shirley, \$2,224.21; Stoneham, \$12,616.81; Stow, \$1,478.65; Sudbury, \$3,696.07; Tewksbury, \$7,793.53; Townsend, \$6,774.84; Tyngsboro, \$13,549.52; Wakefield, \$11,-958.53; Waltham, \$612.58; Watertown, \$10,319.16; Wayland, \$11,670.38; Westford, \$14,415.20; Wilmington, \$4,946.61; Winchester, \$30,547.35.

Norfolk County.—Bellingham, \$2,903.28; Foxboro, \$10,350.57; Franklin, \$8,956.57; Medfield, \$1,232.20; Medway, \$903.62; Millis, \$1,804.46; Needham, \$8,117.05; Norfolk, \$3,368.12; Plainville, \$1,481.77; Walpole, \$8,912.55; Weymouth, \$13,674.83; Wrentham, \$7,886.15.

Plymouth County.—Bridgewater, \$5,530.86; Brockton, \$13,528.48; Carver, \$2,464.42; Hanover, \$6,651.62; Lakeville, \$1,847.89; Marion, \$2,464.42; Marshfield, \$5,725.15; Middleboro, \$2,879.45; Pembroke, \$4,-928.84; Rockland, \$11,715.98; West Bridgewater, \$7,327.86.

Worcester County.—Ashburnham, \$3,926.20; Athol, \$1,848.32; Auburn, \$10,935.13; Barre, \$6,951.43; Berlin, \$11,034.72; Blackstone, \$6,811.97; Bolton, \$17,809.17; Boylston, \$21,013.75; Brookfield, \$2,731.97; Charlton, \$3,997.75; Clinton, \$9,368.59; Dana, \$6,713.49; Douglas, \$5,534.98; Dudley, \$3,755.88; East Brookfield, \$3,265.36; Grafton, \$2,427.89; Hardwick, \$5,426.41; Harvard, \$3,695.29; Holden, \$6,371.21; Hubbardston, \$10,-520.95; Leicester, \$4,928.67; Leominster, \$633.02; Lunenburg, \$8,210.35; Mendon, \$8,023.83; Milford, \$7,464.52; Millville, \$5,360.65; New Braintree, \$2,956.04; N. Brookfield, \$6,402.86; Northboro, \$352.46; Northbridge, \$11,171.12; Oakham, \$7,380.73; Oxford, \$1,399.53; Paxton, \$6,-703.50; Petersham, \$4,304.15; Phillipston, \$6,620.62; Princeton, \$7,-036.67; Royalston, \$6,407.45; Rutland, \$7,021.38; Shrewsbury, \$6,375.89; Southboro, \$1,879.12; Southbridge, \$15,929.77; Spencer, \$3,442.09; Sterling, \$11,900.92; Sturbridge, \$2,969.80; Sutton, \$14,237.48; Templeton, \$5,065.42; Upton, \$14,044.00; Uxbridge, \$12,094.76; Warren, \$2,118.59; West Boylston, \$7,822.91; West Brookfield, \$5,485.83; Westboro, \$985.77; Westminster, \$9,581.83; Winchendon, \$1,394.39.

REPAIR AND IMPROVEMENT OF PUBLIC WAYS, EXCLUSIVE OF STATE
HIGHWAYS, IN CERTAIN TOWNS.

(Sections 26 to 29 and 31 of Chapter 81, General Laws, as amended)

During the year the Department contracted for work to be done in the towns named in the following table, which also shows the road mileage in the towns and the allotments or contributions by the State and towns:

Counties and Towns	Miles of Road	State	Allotment Town
<i>Barnstable County:</i>			
Brewster	40	\$4,000 00	\$4,000 00
Dennis	79	7,900 00	7,900 00
Eastham	41	4,100 00	3,075 00
Mashpee	27	2,700 00	2,025 00
Sandwich	67	6,700 00	6,700 00
Truro	29	2,900 00	3,625 00
Wellfleet	36	3,600 00	4,500 00
<i>Berkshire County:</i>			
Alford	19	1,900 00	760 00
Becket	58	5,800 00	2,320 00
Cheshire	42	4,200 00	4,200 00
Clarksburg	14	1,400 00	2,100 00
Egremont	32	3,200 00	2,400 00
Florida	43	4,300 00	3,225 00
Hancock	30	3,000 00	1,200 00
Hinsdale	35	3,500 00	2,625 00
Lanesborough	42	4,200 00	3,150 00
Monterey	52	5,200 00	2,080 00
Mount Washington	20	2,000 00	500 00
New Ashford	9	900 00	360 00
New Marlborough	85	8,500 00	3,400 00
Otis	49	4,900 00	1,225 00
Peru	37	3,700 00	555 00
Richmond	34	3,400 00	1,700 00
Sandisfield	79	7,900 00	1,185 00
Savoy	56	5,600 00	840 00
Sheffield	77	7,700 00	3,850 00
Tyringham	25	2,500 00	1,000 00
Washington	51	5,100 00	765 00
West Stockbridge	36	3,600 00	2,700 00
Windsor	65	6,500 00	975 00
<i>Bristol County:</i>			
Berkley	42	4,200 00	2,100 00
Freetown	47	4,700 00	3,525 00
Norton	57	5,700 00	5,700 00
Raynham	45	4,500 00	4,500 00
*Swansea	56	5,600 00	8,400 00
*Rehoboth	109	10,900 00	5,450 00
<i>Dukes County:</i>			
Chilmark	14	1,400 00	1,400 00
West Tisbury	13	1,300 00	1,950 00
<i>Essex County:</i>			
Boxford	53	5,300 00	2,650 00
Essex	21	2,100 00	3,150 00
Georgetown	35	3,500 00	4,375 00

Counties and Towns	Miles of Road	Allotment	
		State	Town
Groveland	30	3,000 00	3,750 00
Merrimac	31	3,100 00	4,650 00
Middleton	30	3,000 00	4,500 00
Newbury	37	3,700 00	4,625 00
Rowley	31	3,100 00	3,100 00
Topsfield	38	3,800 00	5,700 00
West Newbury	37	3,700 00	2,775 00
<i>Franklin County:</i>			
Ashfield	81	8,100 00	3,240 00
Bernardston	40	4,000 00	3,000 00
Buckland	45	4,500 00	5,625 00
Charlemont	49	4,900 00	2,450 00
Colrain	84	8,400 00	3,360 00
Conway	72	7,200 00	2,880 00
Deerfield	74	7,400 00	9,250 00
Gill	34	3,400 00	2,550 00
Hawley	49	4,900 00	735 00
Heath	53	5,300 00	795 00
Leverett	38	3,800 00	1,520 00
Leyden	39	3,900 00	585 00
Monroe	18	1,800 00	2,250 00
Northfield	66	6,600 00	4,950 00
New Salem	64	6,400 00	960 00
Rowe	41	4,100 00	1,640 00
Shelburne	48	4,800 00	6,000 00
Shutesbury	40	4,000 00	1,000 00
Warwick	55	5,500 00	825 00
Wendell	48	4,800 00	2,400 00
<i>Hampden County:</i>			
Blandford	78	7,800 00	1,950 00
Brimfield	59	5,900 00	2,950 00
Chester	68	6,800 00	3,400 00
Granville	72	7,200 00	5,400 00
Hampden	34	3,400 00	1,700 00
Holland	30	3,000 00	450 00
Monson	101	10,100 00	7,575 00
Montgomery	27	2,700 00	675 00
Southwick	50	5,000 00	5,000 00
Tolland	41	4,100 00	615 00
Wales	25	2,500 00	1,000 00
Wilbraham	43	4,300 00	6,450 00
<i>Hampshire County:</i>			
Belchertown	112	11,200 00	4,480 00
Chesterfield	59	5,900 00	1,475 00
Cummington	49	4,900 00	1,225 00
Enfield	37	3,700 00	1,480 00
Goshen	28	2,800 00	700 00
Hadley	58	5,800 00	7,250 00
Granby	48	4,800 00	2,400 00
Greenwich	39	3,900 00	1,560 00
Huntington	41	4,100 00	3,075 00
Middlefield	41	4,100 00	615 00
Pelham	39	3,900 00	1,560 00
Plainfield	49	4,900 00	735 00

Counties and Towns	Miles of Road	Allotment	
		State	Town
Prescott	39	3,900 00	585 00
Southampton	56	5,600 00	2,240 00
Westhampton	50	5,000 00	750 00
Williamsburg	43	4,300 00	3,225 00
Worthington	68	6,800 00	1,020 00
<i>Middlesex County:</i>			
Acton	58	5,800 00	8,700 00
Ashby	56	5,600 00	2,240 00
Ashland	38	3,800 00	5,700 00
Bedford	35	3,500 00	5,250 00
Boxborough	23	2,300 00	920 00
Burlington	34	3,400 00	5,100 00
Carlisle	42	4,200 00	3,150 00
Dracut	61	6,100 00	9,150 00
Dunstable	37	3,700 00	925 00
Groton	70	7,000 00	10,500 00
Holliston	50	5,000 00	7,500 00
Hopkinton	66	6,600 00	6,600 00
Lincoln	40	4,000 00	6,000 00
Littleton	42	4,200 00	5,250 00
North Reading	31	3,100 00	4,650 00
Pepperell	68	6,800 00	6,800 00
Sherborn	43	4,300 00	4,300 00
Shirley	46	4,600 00	4,600 00
Stow	45	4,500 00	3,375 00
Sudbury	64	6,400 00	4,800 00
Tewksbury	56	5,600 00	8,400 00
Townsend	70	7,000 00	5,250 00
Tyngsborough	40	4,000 00	3,000 00
Westford	85	8,500 00	10,625 00
<i>Norfolk County:</i>			
Bellingham	44	4,400 00	6,600 00
Medfield	40	4,000 00	6,000 00
Medway	44	4,400 00	6,600 00
Millis	39	3,900 00	5,850 00
Norfolk	41	4,100 00	4,100 00
Plainville	32	3,200 00	4,000 00
<i>Plymouth County:</i>			
Carver	68	6,800 00	6,800 00
Halifax	34	3,400 00	3,400 00
Hanson	36	3,600 00	5,400 00
Lakeville	42	4,200 00	3,150 00
Norwell	47	4,700 00	4,700 00
Pembroke	48	4,800 00	6,000 00
Plympton	30	3,000 00	1,500 00
Rochester	50	5,000 00	3,750 00
<i>Worcester County:</i>			
Ashburnham	75	7,500 00	5,625 00
Barre	110	11,000 00	8,250 00
Berlin	39	3,900 00	2,925 00
Blackstone	34	3,400 00	5,100 00
Bolton	53	5,300 00	2,650 00
Boylston	40	4,000 00	3,000 00

Counties and Towns	Miles of Road	Allotment	
		State	Town
Brookfield	37	3,700 00	3,700 00
Charlton	116	11,600 00	4,640 00
Dana	43	4,300 00	1,720 00
Douglas	70	7,000 00	5,250 00
Dudley	63	6,300 00	7,875 00
East Brookfield	19	1,900 00	2,375 00
Grafton	68	6,800 00	10,200 00
Hardwick	96	9,600 00	7,200 00
Harvard	56	5,600 00	5,600 00
Holden	77	7,700 00	7,700 00
Hubbardston	75	7,500 00	1,875 00
Lancaster	58	5,800 00	7,250 00
Leicester	66	6,600 00	8,250 00
Lunenburg	66	6,600 00	4,950 00
Mendon	36	3,600 00	3,600 00
New Braintree	49	4,900 00	1,225 00
North Brookfield	69	6,900 00	6,900 00
Northborough	46	4,600 00	4,600 00
Oakham	45	4,500 00	1,125 00
Oxford	66	6,600 00	8,250 00
Paxton	29	2,900 00	2,175 00
Petersham	70	7,000 00	3,500 00
Phillipston	41	4,100 00	1,025 00
Princeton	72	7,200 00	2,880 00
Royalston	67	6,700 00	1,675 00
Rutland	68	6,800 00	3,400 00
Southborough	45	4,500 00	6,750 00
Spencer	100	10,000 00	12,500 00
Sterling	72	7,200 00	5,400 00
Sturbridge	70	7,000 00	3,500 00
Sutton	84	8,400 00	4,200 00
Templeton	63	6,300 00	7,875 00
Upton	60	6,000 00	4,500 00
Warren	71	7,100 00	8,875 00
West Boylston	35	3,500 00	5,250 00
West Brookfield	53	5,300 00	3,975 00
Westborough	57	5,700 00	8,550 00
Westminster	77	7,700 00	3,080 00

EXPENDITURES FOR REPAIR AND IMPROVEMENT OF PUBLIC WAYS

The expenditures during the year in various Counties were:—

Barnstable, \$32,763.89	Hampden, \$68,996.61
Berkshire, \$109,474.33	Hamphire, \$93,087.88
Bristol, \$39,614.04	Middlesex, \$132,274.53
Dukes, \$3,192.59	Norfolk, \$25,779.72
Essex, \$35,043.94	Plymouth, \$38,256.93
Franklin, \$115,299.03	Worcester, \$270,729.66
	Total, \$964,513.15

Details of the foregoing expenditures follow:

Barnstable County.—Brewster, \$4,102.97; Dennis, \$7,563.83; Eastham, \$4,549.18; Mashpee, \$2,786.10; Sandwich, \$6,992.45; Truro, \$3,047.30; Wellfleet, \$3,722.06.

Berkshire County.—Alford, \$1,496.47; Becket, \$7,101.71; Cheshire, \$4,178.07; Clarksburg, \$1,692.59; Egremont, \$3,017.37; Florida, \$4,493.72; Hancock, \$3,871.19; Hinsdale, \$3,590.31; Lanesboro, \$4,712.75; Monterey,

\$5,805.16; Mt. Washington, \$2,003.32; New Ashford, \$810.81; New Marlboro, \$9,960.50; Otis, \$4,955.80; Peru, \$3,610.46; Richmond, \$4,132.33; Sandisfield, \$9,490.12; Savoy, \$6,156.91; Sheffield, \$8,879.67; Tyringham, \$2,573.66; Washington, \$5,678.26; West Stockbridge, \$3,918.77; Windsor, \$7,344.38.

Bristol County.—Berkley, \$5,440.76; Freetown, \$5,115.11; Norton, \$6,203.43; Raynham, \$4,897.44; Rehoboth, \$11,862.70; Swansea, \$6,094.60.

Dukes County.—Chilmark, \$1,712.47; West Tisbury, \$1,480.12.

Essex County.—Boxford, \$5,768.10; Georgetown, \$3,809.12; Groveland, \$3,264.96; Merrimac, \$3,373.80; Middleton, \$3,264.96; Newbury, \$4,026.79; Rowley, \$3,373.80; Topsfield, \$4,135.62; West Newbury, \$4,026.79.

Franklin County.—Ashfield, \$8,080.78; Bernardston, \$4,353.27; Buckland, \$5,060.69; Charlemont, \$4,843.03; Colrain, \$9,794.12; Conway, \$8,372.29; Deerfield, \$7,971.95; Gill, \$3,781.92; Hawley, \$5,332.77; Heath, \$5,768.10; Leverett, \$4,026.79; Leyden, \$4,244.45; Monroe, \$1,904.56; New Salem, \$6,992.46; Northfield, \$6,747.59; Rowe, \$4,353.28; Shelburne, \$6,421.09; Shutesbury, \$4,217.24; Sunderland, \$244.87; Warwick, \$5,686.48; Wendell, \$5,958.56; Whately, \$1,142.74.

Hampden County.—Blandford, \$8,897.70; Brimfield, \$6,572.87; Chester, \$7,609.83; Granville, \$7,835.77; Hampden, \$3,455.42; Holland, \$2,882.54; Monson, \$11,406.89; Montgomery, \$3,295.09; Southwick, \$5,441.61; Tolland, \$4,634.98; Wales, \$2,311.34; Wilbraham, \$4,652.57.

Hampshire County.—Belchertown, \$12,188.72; Chesterfield, \$6,419.58; Cummington, \$5,332.75; Enfield, \$3,342.31; Goshen, \$3,047.30; Granby, \$4,870.24; Greenwich, \$4,434.59; Hadley, \$6,312.23; Hatfield, \$1,224.36; Huntington, \$4,190.43; Middlefield, \$4,462.12; Pelham, \$4,162.83; Plainfield, \$5,332.77; Prescott, \$3,645.88; Southampton, \$6,094.60; Westhampton, \$5,441.60; Williamsburg, \$4,679.78; Worthington, \$7,905.79.

Middlesex County.—Acton, \$6,312.26; \$6,094.60; Ashland, \$4,135.62; Bedford, \$3,809.12; Boxboro, \$2,503.14; Burlington, \$3,700.29; Carlisle, \$4,570.95; Dracut, \$6,638.76; Dunstable, \$4,026.79; Groton, \$7,618.25; Holliston, \$5,441.60; Hopkinton, \$8,858.93; Lincoln, \$4,353.28; Littleton, \$4,570.95; No. Reading, \$3,373.80; Pepperell, \$7,400.58; Sherborn, \$4,679.78; Shirley, \$5,006.28; Stow, \$4,897.44; Sudbury, \$6,965.25; Tewksbury, \$6,094.60; Townsend, \$7,618.25; Tyngsboro, \$4,353.28; Westford, \$9,250.73.

Norfolk County.—Bellingham, \$4,448.63; Medfield, \$4,353.28; Medway, \$4,788.61; Millis, \$4,244.45; Norfolk, \$4,462.12; Plainville, \$3,482.63.

Plymouth County.—Carver, \$7,236.59; Halifax, \$4,002.87; Hanson, \$4,256.02; Lakeville, \$4,521.61; Norwell, \$4,944.69; Pembroke, \$4,750.42; Plympton, \$3,270.79; Rochester, \$5,273.94.

Worcester County.—Ashburnham, \$7,817.80; Barre, \$11,330.82; Berlin, \$3,843.80; Bolton, \$5,554.63; Boylston, \$4,361.00; Brookfield, \$4,431.60; Charlton, \$12,725.18; Dana, \$4,237.90; Douglas, \$6,658.55; Dudley, \$6,856.42; East Brookfield, \$1,929.63; Grafton, \$6,506.09; Harvard, \$6,094.60; Hardwick, \$10,273.47; Holden, \$7,552.08; Hubbardston, \$7,351.04; Lancaster, \$6,312.26; Leicester, \$6,358.65; Lunenburg, \$7,434.82; Mendon, \$3,836.32; New Braintree, \$4,410.14; No. Brookfield, \$5,807.44; Northboro, \$5,006.28; Oakham, \$4,157.49; Oxford, \$5,281.86; Paxton, \$3,250.03; Petersham, \$7,618.25; Phillipston, \$4,462.12; Princeton, \$6,704.75; Royalston, \$7,286.36; Rutland, \$6,039.51; Southboro, \$4,706.41; Spencer, \$11,779.99; Sterling, \$7,786.41; Sturbridge, \$6,292.57; Sutton, \$7,701.31; Templeton, \$6,063.80; Upton, \$5,382.90; Warren, \$7,696.49; West Boylston, \$3,260.89; West Brookfield, \$4,276.10; Westboro, \$6,203.43; Westminster, \$8,088.47.

HIGHWAY IMPROVEMENTS AUTHORIZED BY SPECIAL ACTS

In accordance with the provisions of Chapter 347, Acts of 1933, the following contract was entered into:—

Quincy-Weymouth, September 27, 1933, contract made with Blakeslee Rollins Corporation, of Boston, for furnishing and erecting a temporary bridge with approaches over Fore River; the surface of the approaches consisting of bituminous macadam. The proposal amounted to \$86,924.10. Work about one-fourth completed. Expenditure during 1933, \$29,806.61.

In accordance with the provisions of Chapter 445, Acts of 1931, as amended by Chapter 258, Acts of 1932, the following contract was entered into:—

Revere, February 28, 1933, contract made with C & R Construction Company, of Boston, for constructing and reconstructing about 5,980 feet of State and City Highway; the surface consisting of bituminous macadam. The proposal amounted to \$131,909.84. Work completed October 7, 1933. Expenditure during 1933, \$123,407.99.

In accordance with the provisions of Chapter 302, Acts of 1932, the following contract was entered into:—

Cambridge-Arlington-Belmont, October 25, 1933, contract made with B. Perini & Sons, Inc., of Framingham, for constructing about 8,220 feet of State highway on new location in Cambridge, Arlington and Belmont; and constructing a reinforced concrete bridge over Alewife Brook at the dividing line between the town of Arlington and city of Cambridge, a three-span steel stringer bridge over the Boston & Maine Railroad in Arlington, and a two-span steel stringer bridge under Pleasant Street at the dividing line between the towns of Arlington and Belmont; the surface of the roadway consisting of sections of reinforced cement concrete, bituminous macadam, and reinforced cement concrete on each side of bituminous macadam section, and the surface over the bridges consisting of bituminous concrete. The proposal amounted to \$556,931.18. Work just commenced. Expenditure during 1933, \$23,898.00.

In accordance with the provisions of Chapter 420, Acts of 1930, as amended by Chapter 454, Acts of 1931, the following contract was entered into:—

Boston, November 23, 1933, contract made with A. G. Tomasello & Son, Inc., of Boston, for constructing about 1,568 feet of State highway on Water Street; the surface consisting of cement concrete "Sheet Type" in the center and one lane of bituminous macadam on each side. The proposal amounted to \$36,546.40. Work not yet commenced.

NEW OFFICE BUILDING FOR DEPARTMENT OF PUBLIC WORKS AND WORK INCIDENTAL THERETO

April 11, 1933, contract made with the Laboratory Furniture Co., Inc., of New York, for furnishing, building and installing laboratory furniture. The proposal amounted to \$2,282.20. Work completed July 21, 1933. Expenditure during 1933, \$2,084.57.

April 18, 1933, contract made with the Allen Shade Holder Company, Inc., of Boston, for furnishing and installing window shades. The proposal amounted to \$2,054.57. Work completed August 12, 1933. Expenditure during 1933, \$3,015.57.

April 28, 1933, contract made with The Massachusetts Motor Trucking & Garage Co., of Boston, for moving furniture and equipment of the Engineering and Main Offices of the Department of Public Works. The proposal amounted to \$1,891.75. Work completed May 23, 1933. Expenditure during 1933, \$1,980.15.

May 9, 1933, contract made with The E. F. Hauserman Company, of Boston, for dismantling and re-assembling office partitions for the Engineering Offices of the Department of Public Works. The proposal

amounted to \$394.00. Work completed July 29, 1933. Expenditure during 1933, \$574.00.

June 21, 1933, contract made with Snead & Company, of Boston, for furnishing and installing metal partitions. The proposal amounted to \$9,950.00. Work completed January 15, 1934. Expenditure during 1933, \$8,037.10.

Nov. 21, 1933, contract made with the Allen Shade Holder Company, Inc., of Boston, for furnishing and installing window shades. The proposal amounted to \$1,388.29. Work not yet commenced.

Nov. 21, 1933, contract made with Snead & Company, of Boston, for furnishing and erecting steel office partitions. The proposal amounted to \$13,301.50. Work not yet commenced.

Nov. 29, 1933, contract made with F. E. Berry Jr. & Co. Inc., of Boston, for furnishing and installing acoustical treatment on ceilings. The proposal amounted to \$2,400.00. Work not yet commenced.

MISCELLANEOUS CONTRACTS

Boston-Brookline.—April 18, 1933, contract made with the Bay State Tree Surgery Company, of Lancaster, for furnishing and planting trees on the West Roxbury Parkway. The proposal amounted to \$3,435.88. Work completed May 20, 1933. Expenditure during 1933, \$3,195.70.

Revere.—June 14, 1933, contract made with McGunigle & Tounge, Inc., of Boston, for furnishing in place conduits, combinations post boxes and cables on Beach Street, Winthrop Avenue and Ocean Avenue. The proposal amounted to \$2,173.00. Work completed September 5, 1933. Expenditure during 1933, \$2,263.56.

TRANSFER OF PORTION OF GASOLINE TAX UNDER PROVISIONS OF CHAPTER 370, ACTS OF 1933

The state treasurer is hereby authorized and directed to transfer the sum of eight million, twenty-eight thousand three hundred and twenty dollars from the Highway Fund to the General Fund.

THE REGULATION OF ADVERTISING SIGNS AND DEVICES WITHIN THE PUBLIC VIEW

(Sections 29-33, Chapter 93, General Laws, as amended)

In accordance with the provisions of sections 29 to 33 inclusive, chapter 93, General Laws, as amended by chapters 85, 237, 334 and 490, Acts of 1924, providing for the control of billboards and other advertising devices on public ways or on private property within public view of any highway, public park or reservation, the Department adopted on Jan. 24, 1924, certain new rules and regulations, superseding all former issues; and these have continued in force during the present year.

Applications, Licenses and Permits.—Licenses were granted to 25 individuals and others to engage in the business of advertising in the Commonwealth by the use of outdoor signs.

Of 342 applications received for permits for the erection of advertising signs, 175 permits have been granted; and 29 permits were granted on applications filed previous to 1933. Sixty-one (61) applications for the erection of new signs were not approved because the locations were in violation of the rules and regulations adopted Jan. 24, 1924; and 23 applications for permits were cancelled.

Of 2,888 renewal applications sent to those whose permits were to expire June 30, 1933, 2,617 were returned to the Department requesting renewal; and on account of the advertisers failing to renew, 271 permits were cancelled. The number of renewal applications approved, to be in force until June 30, 1934 was 2,861. The total number of permits in force November 30, 1933, was 2,971.

Receipts and Expenditures.—The total receipts for the year ending

November 30, 1933, were \$13,231.92 and the expenditures were \$21,092.36, excess of the expenditures over the receipts being due to printing and extra services rendered in connection with litigation now pending before the Mass. Supreme Court—Suffolk County No. 42843. Eq.

The Removal of Signs.—The "sign Patrol" consisting of small trucks completely equipped for the work, have removed 140,000 signs during the year in addition to 10,000 removed by other agents of the Department, under authority of section 30 A, Chapter 93, General Laws, from within the highways and from private property.

Injunction:—On June 19, 1925, a temporary injunction was granted the General Outdoor Advertising Company, Inc., and others, as complainants enjoining and restraining the Commissioners, constituting the Department of Public Works, for the Commonwealth, until the further order of the Court, from proceeding in any way against them for any alleged failure to comply with the Rules and Regulations for the control and restriction of the billboards, signs and other devices, promulgated under date of Jan. 24, 1924. This injunction is still in force and will be until the case is settled in Court.

Hearings.—Hearings were given to officials of Brookline, Leominster, Lexington, Stoneham, Winchester.

CONTRACT PRICES DEC. 1, 1932, TO NOV. 30, 1933

TOWN OR CITY	CONTRACTOR	EXCAVATION			BORROW		Plain Concrete Masonry (Cu. Yd.)	Asphalt (Gal.)
		Earth (Cu. Yd.)	Ledge (Cu. Yd.)	Trench (Cu. Yd.)	Ord. (Cu. Yd.)	Gravel (Cu. Yd.)		
*Amesbury . . .	J. E. Watkins Co.	\$0 25	\$1 25	\$0 65	\$0 20	\$0 25	\$14 00	\$0 09
Arlington . . .	A. & P. Construction Co.	0 25	1 50	-	-	0 25	-	0 085
*Arlington, Belmont & Cambridge . . .	B. Perini & Sons	0 33	2 00	0 75	0 39	0 71	13 00	0 085
*Ashby & Town- send	G. Rotundi & Son	0 35	1 70	0 80	-	0 40	14 00	0 105
†Barre	R. H. Newell Co.	0 30	1 50	0 90	-	0 30	15 00	-
*Boston-Hyde Park	A. G. Tomasello & Son	0 30	1 00	0 75	0 30	0 60	12 00	0 09
Bourne	Arute Bros., Inc.	0 20	2 00	0 40	0 10	0 20	12 00	0 09
*Brookline & Newton	Coleman Bros.	0 22	1 25	1 00	0 22	0 28	13 00	0 08
*Burlington, Win- chester & Woburn	M. McDonough	0 25	1 50	0 75	-	0 40	10 00	0 09
*Charlton & Oxford	Lane Construction Corp.	0 60	0 60	2 00	-	0 65	20 00	0 10
*Chester	National Construction Co.	0 75	-	2 00	0 40	0 40	16 00	0 11
Clinton	Menici Construction Co.	0 25	3 00	1 00	-	0 35	15 00	0 09
*Cohasset & Scitu- ate	C. M. Callahan, Inc.	0 20	1 00	0 50	0 20	0 30	12 00	0 08
Colrain	N. Beacco & Son	0 40	1 30	2 00	0 35	-	10 00	0 14
*Conway & Deer- field	Kelleher Corp.	0 75	0 75	1 10	0 20	0 45	15 00	0 10
*East Boston & Re- vere	A. G. Tomasello	0 45	3 00	1 00	0 45	0 85	15 00	0 085
Eastham	S. W. Lawrence	0 22	-	0 50	0 22	-	15 00	0 12
*Easton & Stoughton	C. Bianchi & Co.	0 35	1 75	0 80	0 35	0 40	18 00	0 115
Hancock	Kelleher Corp.	0 28	0 28	0 75	0 28	0 37	12 00	0 10
*Huntington . . .	Lane Construction Corp.	0 40	0 40	1 25	0 10	0 60	17 00	0 09
*Lanesboro & Pitts- field	Lane Construction Corp.	0 30	0 30	0 50	0 30	0 40	18 00	0 10
*Lawrence & North Andover	S. Rotundi & Sons	0 30	2 00	0 80	-	0 50	16 00	0 12
*Lynn & Revere . .	Crandall Engineering Co.	-	1 00	1 00	0 35	0 75	-	-
*Marshfield & Scit- uate	Lee Construction Co.	0 35	2 00	1 25	0 25	0 42	20 00	0 105
*†Mattapoisett . .	State Forces	0 45	2 00	0 80	0 35	0 47	14 00	0 11
Middleboro . . .	Arute Bros., Inc.	0 15	1 00	0 40	-	0 10	10 00	0 079
*Newbury	E. H. Lewis	0 15	4 00	0 65	-	0 37	10 00	0 10
Orange	E. Barilone Co.	0 30	2 00	0 45	-	0 35	10 00	0 12
†Oxford & Webster	C. & R. Construction Co., Inc.	0 30	0 30	0 70	0 30	0 30	10 00	0 08
Pelham	Kelleher Corp.	0 45	2 50	1 10	0 40	0 50	16 00	0 10
Pittsfield	C. B. Lindholm	0 25	0 25	0 60	0 25	0 40	15 00	0 10
Pittsfield	Lee Construction Co., Inc.	0 20	1 50	0 60	-	0 30	-	0 10
*Quincy & Wey- mouth	Blakeslee & Rollins Corp.	0 28	-	0 75	0 60	0 50	10 00	0 09
Rehoboth	E. F. Jones	0 15	3 00	0 20	0 30	0 30	12 00	0 09
Revere (Secs. 2 & 3)	C. & R. Construction Co.	0 20	0 01	0 40	0 25	0 48	10 00	0 07
Sherborn	E. H. Lewis	0 25	4 00	0 30	0 32	0 32	15 00	0 09
Southampton . .	D. O'Connell's Sons	0 30	0 38	1 25	0 40	0 65	15 50	-
*Sterling-West Boylston	M. Pandolph Co.	0 39	5 00	1 25	0 39	0 39	20 00	0 095
*Templeton . . .	Lane Construction Co.	0 50	0 50	1 25	0 25	0 50	16 00	0 09
Wareham	S. W. Lawrence	0 28	2 00	0 80	-	0 35	15 00	0 10
Williamsburg . . .	M. Siano & Son	0 29	0 90	-	0 22	0 65	-	0 12
Williamstown . .	J. F. Fitz-Gerald	0 25	1 10	0 80	0 22	0 30	12 00	0 10
†Yarmouth	S. W. Lawrence	0 10	2 00	0 50	0 10	-	15 00	0 09

¶ (Barre) Later awarded to Town Forces.

† (Mattapoisett) State Force Job on basis of low bid.

‡ Federal Aid Emergency construction projects.

* N. R. A. projects.

CONTRACT PRICES DEC. 1, 1932, TO NOV. 30, 1933

Concrete Surface (Cu. Yd.)	Broken Stone (Cu. Yd.)	Cable Guard Rail (Lin. Ft.)	PIPE CULVERTS (lineal feet)								Stock Fence (Lin. Ft.)	Catch Basins (Each)	Reinf. Conc. Ma- sonry (Cu. Yd.)	Reinf. Steel for Struct (Lb.)
			CLAY			REINF. CONCRETE								
			10 in.	12 in.	15 in.	12 in.	15 in.	18 in.	24 in.					
-	\$1 20 1 20	\$0 42	-	\$0 45	-	\$0 70	-	-	-	\$0 15	\$50 00	\$14 00	\$0 05	
\$7 73	1 70	-	-	0 60	-	0 95	\$1 50	\$1 70	\$2 65	0 18	47 00	13 25	0 035	
-	2 25	0 45	\$0 40	0 52	-	0 90	1 40	1 80	-	0 20	42 00	17 00	0 05	
-	-	0 40	-	-	-	-	-	-	-	0 15	-	15 00	0 06	
7 75	1 50	-	0 45	0 60	-	-	-	-	-	-	60 00	-	-	
-	2 00	0 35	-	-	-	-	-	-	-	0 12	30 00	-	-	
5 00	1 60	-	0 40	0 50	\$1 00	1 00	-	-	2 50	-	48 00	13 00	0 035	
-	1 30	0 60	-	0 55	1 00	0 85	1 20	1 60	2 80	0 20	50 00	10 00	0 10	
-	2 35	0 45	-	-	0 90	1 00	-	2 00	3 00	0 15	60 00	20 00	0 05	
-	2 00	-	-	-	-	-	-	-	2 75	0 17	-	18 00	0 07	
-	1 80	0 45	-	-	-	0 75	-	-	-	-	45 00	-	-	
-	1 50	0 40	-	0 40	-	0 75	1 00	1 25	1 75	0 15	35 00	15 00	0 03	
-	-	0 40	-	-	-	-	-	-	-	-	35 00	12 00	0 03	
-	1 65	0 40	0 40	0 50	0 90	0 90	1 25	1 70	2 50	0 15	55 00	17 00	0 045	
7 25	1 00	-	0 40	0 55	0 90	0 85	1 15	1 50	2 30	0 15	50 00	11 00	0 035	
-	-	0 50	-	-	-	0 90	-	-	-	0 16	50 00	-	-	
7 15	2 00	0 50	0 50	0 55	-	1 05	1 50	2 00	-	-	60 00	18 00	0 05	
-	2 25	0 35	-	-	-	-	-	-	-	0 15	-	14 50	0 04	
-	1 50	0 40	-	-	-	0 75	-	1 30	2 00	0 15	-	17 00	0 04	
6 25	2 25	0 45	-	0 60	-	0 85	-	1 50	3 00	-	55 00	18 00	0 05	
7 50	2 00	0 50	0 50	0 60	-	-	1 60	-	-	0 20	50 00	See Bridge Items	-	
-	-	-	0 50	0 70	-	-	-	-	-	-	50 00	-	0 04	
-	1 85	0 45	0 45	0 55	0 90	1 00	-	-	-	0 16	50 00	15 00	0 05	
-	2 00	0 40	0 40	0 50	0 90	0 90	-	1 60	-	0 15	45 00	16 00	0 05	
-	2 00	0 05	-	0 35	-	0 60	-	1 50	-	0 15	30 00	-	-	
-	1 50	0 30	0 50	0 60	0 90	0 85	1 50	1 70	2 50	0 13	40 00	15 00	0 05	
-	2 00	-	0 40	0 50	1 50	-	-	-	3 50	-	40 00	12 00	0 04	
-	1 95	0 40	-	0 35	-	0 65	-	1 15	-	0 14	35 00	12 00	0 03	
-	1 60	0 45	-	0 55	-	-	-	-	-	0 15	-	16 00	0 06	
-	1 90	0 45	-	0 60	0 90	0 70	-	1 50	2 00	-	40 00	20 00	0 10	
6 10	2 50	0 40	-	0 40	-	0 80	-	-	-	0 14	35 00	10 20	0 029	
-	1 80	-	-	-	-	-	-	-	-	-	-	15 00	0 04	
-	1 50	-	-	-	-	-	-	-	-	0 14	-	-	-	
6 00	1 35	-	0 28	0 35	-	0 60	0 70	1 15	1 80	-	30 00	11 00	0 03	
-	1 00	0 30	0 40	0 50	-	0 70	-	-	3 00	-	50 00	15 00	0 03	
-	2 00	0 40	-	-	-	-	-	-	-	0 20	-	20 00	0 035	
7 17	1 60	0 40	0 45	0 55	1 00	0 90	1 30	1 75	3 00	0 16	60 00	19 00	0 035	
-	2 10	0 40	-	0 60	-	0 95	1 40	-	2 75	0 15	60 00	17 00	0 04	
-	2 20	0 45	-	0 60	-	0 80	1 00	1 50	-	0 18	50 00	-	-	
-	2 00	0 40	-	-	-	-	-	-	-	-	-	11 80	0 0296	
-	2 25	0 40	-	0 60	-	1 10	-	1 60	2 50	0 15	40 00	10 60	0 03	
-	3 00	0 40	-	0 50	-	0 80	-	-	3 00	0 14	40 00	15 00	0 04	

CONTRACT PRICES DEC. 1, 1932, TO NOV. 30, 1933

TOWN OR CITY	CONTRACTOR	EXCAVATION		Struct. Steel Lb.	Reinf. Steel For Struct. Lb.
		Bridge Cu. Yd.	Channel Cu. Yd.		
*Arlington-Belmont- Cambridge	B. Perini & Son	\$1 00	—	\$0 035	\$0 035
Ayer	Eng. Service & Const. Co.	1 00	—	—	0 05
†Barre	R. H. Newell Co.	2 00	\$0 90	0 045	0 06
*Brookline-Newton	Coleman Bros. Inc.	4 00	—	—	0 035
†Cohasset-Scituate	C. M. Callahan Inc.	1 00	2 00	—	0 03
Colrain	N. Beacco & Sons	1 00	0 50	0 025	0 03
*Conway-Deerfield	Kelleher Corp.	2 00	1 00	—	0 045
*E. Boston-Revere	A. Barruffaldi	1 50	—	—	0 0325
Easton	Arute Bros. Inc.	2 75	1 25	—	0 05
Gt. Barrington	Roy W. Wright	1 50	—	—	0 032
Hancock	Kelleher Corp.	50	50	—	0 04
Hopkinton-Southboro	N. F. Smith & Co.	1 00	0 40	—	0 02
		Lump Sum	—		
*Lynn-Revere	Crandall Eng. Co.	—	—	0 05	0 04
*Marshfield-Scituate	Lee Constr. Co.	1 00	—	0 0455	0 034
†Oxford-Webster	C. & R. Const. Co.	30	3 00	0 041	0 03
Pittsfield	Lee Constr. Co.	1 00	—	0 028	0 029
*Quincy-Weymouth	Blakeslee Rollins Corp.	5 00	—	0 07	0 04
Revere (Secs. 2 and 3)	C. & R. Const. Co.	20	—	0 038	0 03
Southampton	D. O'Connell's Sons	38	—	—	0 035
*Sterling-W. Boylston	M. Pandolph Co.	—	5 00	—	0 035
*Templeton	Lane Const. Co.	4 00	—	—	0 04
Williamsburg	M. Siano & Son	80	50	—	0 0296
Williamstown	J. F. Fitzgerald	1 50	1 00	—	0 03
†Yarmouth	S. W. Lawrence	2 00	—	—	0 04

File foot note (Lynn & Revere) price given is average price of different length piles.

*Indicates NRA Projects.

†(Barre) Later awarded to Town forces.

‡Federal Aid Emergency Construction Projects.

CONTRACT PRICES DEC. 1, 1932, TO NOV. 30, 1933

CONCRETE (Cu. Yd.)					Rip Rap cu. yd.	Bit. Conc. "D" ton	Bit. Water Pr'f'g S.Y.	Zinc Plates lb.	Lum- ber Sh't'g MFBM	WOOD PILES			Conc. Piles Lin. ft.	Test Piles Each
REINFORCED	PLAIN	RUBBLE		Y.P. (Per						Spr'ce Lin.	Oak Ft.)			
1:2:3½	1:2:4	1:2½:5	1:2:4	1:2½:5										
\$13 25	-	\$13 00	\$9 50	\$9 25	\$2 50	-	\$0 25	-	\$60 00	-	\$1 60	-	-	-
-	-	-	9 00	-	-	-	-	-	-	-	-	-	-	-
-	\$15 00	15 00	9 00	-	1 50	-	-	-	-	-	-	-	-	-
-	13 00	13 00	-	10 00	-	\$6 00	0 25	-	-	-	-	-	-	-
-	15 00	12 00	-	-	2 00	-	-	-	-	-	-	-	-	-
-	12 00	10 00	10 00	-	-	-	-	-	40 00	-	-	-	-	-
-	17 00	15 00	12 00	-	2 00	-	0 50	-	60 00	-	-	-	-	-
11 00	-	-	-	7 50	-	6 00	0 25	-	40 00	\$0 35	-	-	\$2 25	\$75 00
-	10 00	-	8 30	-	-	-	-	-	70 00	1 00	-	-	-	-
-	14 50	-	7 25	-	-	-	0 50	\$0 16	0 01	-	-	-	-	-
-	14 50	12 00	-	-	-	-	-	-	-	-	-	-	-	-
-	12 35	-	8 98	-	2 00	-	0 40	0 05	150 00	-	-	-	-	-
(Concrete Priced by Elevation)					3 00	-	0 25	-	-	-	0 34	{ See Pile Foot Note	-	50 00
14 00	-	-	-	-	-	6 00	0 25	0 15	-	0 70	{ Creosoted		-	-
-	12 00	10 00	6 80	-	2 00	-	-	-	10 00	-	-	-	-	-
-	10 20	-	8 00	-	-	-	-	0 16	0 01	-	-	-	-	-
15 00	-	10 00	20 00	-	-	-	-	-	-	-	\$0 33	\$0 47	-	50 00
-	11 00	10 00	6 00	-	1 50	4 00	-	-	10 00	-	-	-	-	-
-	20 00	15 50	-	-	2 25	-	-	0 17	-	-	-	-	4 50	100 00
-	19 00	20 00	18 00	-	-	-	0 50	-	100 00	-	-	-	-	-
-	17 00	16 00	13 00	-	-	-	0 50	-	50 00	-	-	-	-	-
-	11 80	-	9 40	-	1 35	8 36	0 25	0 15	-	-	-	-	-	-
-	10 60	12 00	10 32	-	2 00	10 00	0 30	-	65 00	-	-	0 70	-	75 00
-	15 00	15 00	-	-	2 00	pr ton	-	-	60 00	0 50	-	-	-	-

REGISTRY OF MOTOR VEHICLES

The statistics for the year 1933 continue to show slight decreases in some of the classes of applications handled, but there was a nominal increase in the registration applications.

The demands on the Registry for information from records and data from the files is increasing steadily. There was a salutary decrease in the number of insurance cancellations. The decrease in court abstracts received has continued again this year, with the revenue received from fines also taking another substantial drop.

The regular activities of the Registrar of Motor Vehicles continued during the year in matters of highway safety, including the special attention over Saturday and Sunday week ends and holiday periods. The co-operation of the various safety committees and organizations, police and other officials having to do with highway safety, was helpful.

The removal of the Registry from its quarters at Commonwealth Pier 5 to its offices in the new building of the Department of Public Works at 100 Nashua Street took place in July, 1933. Advantage was taken of the July 4th holiday and the move, which commenced at 12 o'clock noon, Saturday, July 1st, was completed on the 5th, when full service was rendered to the public at the new quarters, beginning at the usual hour, 9 o'clock. On Monday limited but adequate service to the public was rendered at Commonwealth Pier. The move was completed without loss or serious disarrangement of any of the millions of records, applications, folders, cards and data in the Registry files, to say nothing of the thousands of dollars of equipment, both in the way of office furniture and office machinery, none of which suffered serious damage in any respect. The Registry moved into and now occupies the first three floors of this new building and approximately one-half of the basement for storage of supplies, number plates, etc. Experience in the new quarters has indicated that the layout was well planned and efficient and will be adequate for many years to come.

A few of the outstanding figures for the year, together with a comparison with the previous year, follow:—

	1932	1933
Motor Vehicle certificates of registration issued	923,570	931,516
Compulsory insurance cancellation notices received	130,328	101,175
Licenses to operate issued	1,014,635	1,022,662
Examinations of applicants for licenses	81,036	74,988
Licenses and registrations revoked and suspended	73,511	78,431
Licenses revoked for driving under influence of liquor	4,824	4,274
Total number of applications handled	2,018,238	2,024,792
Gross receipts from fees	\$6,142,129.98	\$6,035,102.27

REGISTRATIONS OF PASSENGER CARS, COMMERCIAL VEHICLES AND MOTOR CYCLES

The following registration figures show a 1.31% increase in passenger registrations, a 1.81% decrease in commercial registrations, and motor cycle registrations showed a decrease of approximately 38% over the previous year.

	1905	1915	1925	1929*	1932	1933
Passenger cars	4,889	90,580	663,858	905,636	809,358	819,987
Commercial vehicles	—	12,053	100,480	113,268	112,551	110,506
Motorcycles	553	9,520	10,333	6,168	1,661	1,023
Totals	5,442	112,153	774,671	1,025,072	923,570	931,516

* Peak year.

EXAMINATIONS FOR LICENSES

The system of examining prospective operators of motor vehicles was not changed in any respect during the year 1933, the appointment system being continued and the examination consisting of the usual demonstration on the highways, a reading test, an eye test, and a test of the applicant as to his knowledge of the motor vehicle law. The number of persons examined has continued to decrease at the fifty-five examining points with the following results:—

	1932	1933
Operators passed	68,328	66,547
Operators unfit	8,735	6,966
Restriction removal, passed	3,873	2,371
Restriction removal, unfit	444	261
"Competency" passed	560	330
"Competency" unfit	29	21
Total examinations	81,969	76,496

BRANCH OFFICES

The branch offices of the Registry of Motor Vehicles are able to render practically the same service to the public that is rendered at the main office at Boston, except as to information from the records. Each branch office serves as a headquarters for the district in which it is located, both as to distribution of number plates and licenses, and law enforcement.

The following table gives approximate figures showing the distribution of applications received at the branch offices and at the central office at Boston:—

APPROXIMATE DISTRIBUTION OF REGISTRATIONS, LICENSES, ETC.

	Regis- trations	First Licenses	License Renewals	Miscel- laneous	Totals
Boston:					
Counter	205,000 [*]	—	167,000	76,000	448,000
Mail	151,000	—	410,000	11,000	572,000
Examination	—	20,000	—	4,000	24,000
Pittsfield	22,000	2,000	19,000	5,500	48,500
Springfield	55,000	6,000	54,000	15,000	130,000
Greenfield	11,000	1,000	9,000	3,000	24,000
Northampton	12,000	1,000	9,000	3,500	25,500
Worcester	51,000	6,000	46,000	15,000	118,000
Fitchburg	18,000	1,500	15,000	5,000	40,500
Frammingham	23,000	2,000	13,000	6,000	43,000
Lawrence	31,000	4,000	29,000	8,000	72,000
Lowell	25,000	3,000	22,000	6,000	56,000
Fall River	21,000	3,500	21,000	6,500	52,000
New Bedford	21,000	2,000	25,000	7,000	55,000
Lynn	56,000	6,500	47,000	16,000	125,500
Quincy	32,000	5,500	33,000	9,000	79,500
Brockton	38,000	3,000	32,000	12,000	85,000
Hyannis	9,000	1,500	7,000	2,500	20,000
Nantucket ¹	1,500	—	—	—	1,500
Oak Bluffs ¹	2,500	—	—	—	2,500
Totals	785,000 [*]	68,500	958,000	211,000 ²	2,022,500

During the year the branch offices at Pittsfield, Fall River and Lawrence, upon the expiration of their leases, were moved,—the two former to new and better locations and quarters, while the latter transferred to

¹ Licenses and miscellaneous applications included in counter figures.

² This figure includes approximately 140,000 number plate reissues.

³ Does not include reissues (see Miscellaneous).

new quarters in the same building. In each instance, the contract for the new lease provided for a reduced rental. Negotiations for the removal of the Brockton office are under way and when this change is effected it is believed that the locations and quarters of all the branches will be well adapted to the requirements of the public.

COMPULSORY MOTOR VEHICLE LIABILITY INSURANCE

The following figures show the volume of papers received and notices mailed in connection with the carrying out of the law regarding compulsory motor vehicle liability insurance:

	1932	1933
Causes for Cancellation of Policies:		
For non-payment of premiums	112,994	70,564
For other reasons	17,334	30,611
Total	130,328	101,175
Origin of requests for Cancellation of Policies:		
Insurance companies	93,000	97,877
Finance companies	37,328	3,298
	130,328	101,175
Disposition of applications for cancellations:		
Replacement certificates, adjusting cancellations		8,194
Reinstatements, adjusting cancellations		45,000
Sets of plates returned before effective date of cancellation		13,000
Revocations		34,981
Total		101,175
Return of Plates:		
Returned promptly after revocation		22,048
By Police		5,955
By Inspectors of Registry		3,173
Not returned		3,805
Total revocations		34,981

The decrease in total number of cancellation notices received was probably due to the fact that the finance companies in exercising their powers of attorney caused more general current payments of premiums. Under ideal conditions the only cancellations which should be necessary for this Department to handle should be the so-called "For Cause" cancellations.

PROPERTY DAMAGE

Under the provisions of Section 22A of Chapter 90, General Laws, which became effective September, 1932, the Registrar may, upon receipt of evidence satisfactory to him, suspend the license of any operator who has failed to satisfy a judgment rendered against him after sixty days in any case in which such operator is the defendant in an action brought to recover damages for injuries to property arising out of the use, operation or maintenance on the ways of the Commonwealth of a motor vehicle or trailer.

The following figures indicate the number of cases in which successful plaintiffs availed themselves of the additional facilities provided in the new law for recovering damages and the action taken thereon.

Complaints received	344
Releases received, no action being necessary	81
Licenses or rights to operate suspended	263
Licenses or right to operate reinstated after suspension	59

AIRCRAFT

The statistics of the Aviation Section show a decrease in the number of licensed pilots and airplanes.

Although the total number of pilots flying in the State is less, it is very encouraging to note that there has been a greater decrease in the percentage of accidents, which, no doubt, is partly the result of the two new regulations, — one, the raising of the age limit to obtain a pilot's license to 18 years and the other, the prohibiting from carrying passengers of pilots who have less than 50 hours of solo flying to their credit.

A very strict periodic supervision has been made of the operations at all airports. The active flying fields have been resurveyed by our engineers who have brought the blue prints up to date. A program for air-marking of towns which is well under way is meeting with fair success. Co-operation with the Federal Government in aviation activities has been continued.

The following figures summarize the work of the Aviation Section.

	1932	1933	
Pilot's licenses issued	17	21	
Airplanes registered	37	27	
Duplicates issued	4	4	
Fees received	\$555	\$492	
Pilots' permits issued	476	336	
Aircraft permits issued	323	231	
Pilots examined by flight tests	11	10	
Airplanes inspected	470	269	
Suspensions of licenses and rights to fly	34	27	
Airplanes grounded	149	71	
Reinstatements of licenses, rights and groundings	119	66	
Court prosecutions	5	2	
Rulings promulgated	1	2	
Airports approved	1	1	
Airports disapproved	2	1	
Surveys of fields	15	84	
Investigations made by aircraft inspectors	821	896	
Airplane accidents	86	53	
	1932	1933	
Fatals	8	6	
Non fatals	21	9	
No injury	57	38	
Persons killed	11	10	
Persons injured	38	15	
Ground accidents		13	5
	1932	1933	
Non fatals	3	1	
No injury	10	4	
Persons injured	3	1	

INSPECTION OF MOTOR VEHICLE EQUIPMENT

The fourth periodic inspection of the safety equipment of all motor vehicles registered in the commonwealth was held during the year. The work was carried on by a permanent organization of Official Inspection Stations designated by the Registrar. Most of these stations have been functioning for a period of four years and performed the work honestly and efficiently.

The results of the inspections confirmed the conclusions reached by former experience: that one inspection per year cannot be expected to secure the desired results. When business and other conditions warrant, it is to be hoped that two inspections per year can be conducted.

During the year approximately 790,000 cars were inspected. The result may be summarized as follows:

Total number of cars inspected	790,000
Total O. K. without repair or adjustment	316,000—40%
Total requiring replacement or adjustment	474,000—60%

Repairs or adjustments on the 474,000 vehicles requiring correction of defects in equipment were as follows:

Brakes	213,300—27%
Lights	410,000—52%
Horn	13,430— 2%
Muffler	7,110— 1%
Steering Gear	13,200— 2%
Windshield Cleaner	15,000— 2%
Number Plates	4,187—0.5%

School Bus Inspections

All the school buses operated in Massachusetts under contracts with cities or towns, or owned by cities or towns, were examined by inspectors of this department five times during the year as required by Chapter 271 of the Acts of 1932. These inspections were held during the first weeks of January, March, May, September and November. In each case, about eight hundred vehicles were inspected at 70 designated examining points. Because of the provisions of the law, complete compliance with its equipment requirements cannot be insisted upon until the termination of all transportation contracts existing on August 26, 1932. In general, however, school bus equipment has improved considerably since the first inspection held in October 1932, and many new buses have been put in operation to take the place of vehicles which failed to meet the requirements of the Act.

Brakes, Lights, and Overloads

Eighteen men were regularly assigned to equipment work. Besides their duties in connection with the periodic inspections of motor vehicles and school buses, these men did considerable road work in enforcing equipment requirements. 1,732 vehicles were reported for defective brakes; 22,299 for defective lights. 1,092 registrations were suspended or revoked because of dangerously defective equipment. In addition 339 owners were sent warning notices because of overloading and 15 registrations were revoked for this cause. Equipment inspectors also reported 2,553 cases of improper operation for action by the Registrar and 1,380 cases of violation of laws and regulations regarding equipment, dimensions of vehicles, etc.

Headlamps and Rear Lamps

The Registrar approved four new headlamps and granted several extensions of approval during the year. Three of the new approvals were of the three beam type having a "clear road" beam, a "meeting" beam and a "city" beam,—each of the three beams being accomplished by different combinations of use of the two bulbs in the pair of headlamps. The fourth headlamp approved has six beams and is magnetically operated; but that does not necessarily indicate a tendency towards greater complications. In fact, such is not desirable, the simple systems being more satisfactory. Seven new tail lamps were approved during the year.

MOTOR VEHICLE DEATHS, INJURIES, COLLISIONS

Deaths caused by motor vehicles in 1933 numbered 769, an increase of one or 0.1 per cent as compared with the record of the previous year. The record of classified fatalities, injuries and collisions in the years 1932 and 1933 is as follows:—

Motor Vehicle Accidents to Persons

	Persons Killed		Persons Injured	
	1932	1933	1932	1933
Pedestrians by autos	426	425	15,793	15,180
Pedestrians by motor cycles	2	0	26	26
Pedestrians near street cars	11	8	24	35
Occupants of autos	277	277	30,186	31,325
Occupants of autos at R. R. crossings	16	17	24	18
Occupants of motor cycles	9	9	240	184
Bicycle Riders	12	17	848	920
Occupants horse-drawn vehicles	5	6	279	193
Coasters on sleds	8	6	148	235
Coasters on wheels	2	4	90	133
Totals	768	769	47,658	48,249
	Children Killed		Children Injured	
	1932	1933	1932	1933
Boys	112	115	7,441	7,062
Girls	34	39	4,136	3,599
Totals	146	154	11,577	10,661

Number of Collisions

	1932	1933
Collision with pedestrian	15,672	14,998
Collision with automobile	20,168	20,027
Collision with horse-drawn vehicle	300	256
Collision with railroad train	23	15
Collision with street car	297	339
Collision with fixed object	1,887	2,268
Collision with bicycle	873	927
Non-Collision (overturn)	714	726
Collision with motor cycle	303	238
Collision with sled	120	205
Collision with animal	101	86
Coaster on wheels	82	131
Totals	40,640	40,216
In the daytime	25,394	24,561
After dark	15,246	15,655
Totals	40,640	40,216

ACCIDENT REPORT LETTERS

As provided by section 26, chapter 90, General Laws every operator of a motor vehicle in any manner involved in an accident in which any person is killed or injured is required to report in writing to the Registrar. The number of these formal accident reports received from operators in 1933 was 44,869 as compared with 48,864 received in 1932. Under the requirements of section 29, chapter 90, General Laws, 18,991 similar reports of accidents were received from Police Departments throughout the State in 1933 as against 19,859 received in 1932. In addition, in connection with this reporting of accidents by operators during the fiscal year 1932 there were received 14,769 letters and complaints reporting faulty operating. During the year 1933, these letters and complaints numbered 12,318.

COMPARATIVE STATEMENT OF YEARLY REGISTRATIONS, LICENSES, DEATHS,
INJURIES, REVOCATIONS AND SUSPENSIONS

Year	Automobiles Registered	Motor-Cycles Registered	Total Regis- trations	Number of Persons Killed	Number of Persons Injured	Licenses Issued	Total Sus- pensions and Revo- cations	For Operat- ing Under Influence of Liquor
1910	31,360	3,358	34,718	77	963	41,259	283	22
1911	38,907	3,658	42,565	110	1,248	51,950	360	14
1912	50,132	5,034	55,166	142	1,962	66,645	546	56
1913	62,660	7,127	69,787	188	2,923	81,034	608	87
1914	77,246	8,161	85,407	229	4,010	99,532	858	131
1915	102,633	9,520	112,153	294	6,197	133,935	1,153	202
1916	136,809	10,713	147,522	315	9,131	171,596	1,396	320
1917	174,274	11,065	185,339	438	7,282	214,229	1,831	485
1918	193,497	12,862	206,359	499	8,598	235,140	2,343	553
1919	247,183	13,698	260,881	582	16,287	297,968	2,156	554
1920	304,538	15,142	319,680	481	21,182	261,539	2,944	888
1921	360,731	12,058	372,790	544	11,487	380,519	4,899	1,508
1922	449,838	11,675	461,513	522	15,277	444,173	8,369	2,460
1923	566,150	11,733	577,883	578	16,217	536,819	11,613	3,333
1924	672,315	10,778	683,093	709	19,579	620,439	14,154	4,395
1925	764,338	10,333	774,671	755	25,736	695,378	16,249	4,654
1926	826,224	9,215	835,439	705	25,351	763,951	18,705	4,863
1927	819,703	7,245	826,948	693	31,721	814,094	31,252	4,983
1928	883,595	6,656	890,251	715	42,201	870,160	40,814	5,071
1929	1,018,904	6,168	1,025,072	777	46,111	944,338	53,133	5,381
1930	1,008,476	4,642	1,013,118	795	44,279	982,795	52,954	5,052
1931	1,006,808	3,068	1,009,876	793	48,837	1,024,304	63,841	5,535
1932	921,909	1,661	923,570	768	47,658	1,014,635	73,511	4,824
1933	930,493	1,023	931,516	769	48,249	1,022,662	78,431	4,274

INVESTIGATIONS AND PROSECUTIONS BY INSPECTORS

Investigations were made under the direction of the Chief Inspector relative to fatal and non-fatal accidents, violations of the laws concerning brakes and headlights, inspection of garages, miscellaneous complaints, and the prosecution of motorists in court. The table below shows the wide range of these activities of the inspectors, and reveals an increase in the total number of cases handled.

Classification of Reports

	1932	1933
Accidents, fatal	748	729
Accidents, non-fatal	5,816	5,457
General Reputation	5,943	6,933
Miscellaneous	11,764	12,437
Totals	24,271	25,556
Complaints filed	14,976	12,537
Garages	5,471	8,964
Headlights	21,036	24,031
Prosecutions	752	655
Amount of fines	\$26,175.	\$21,263.

REVOCATIONS AND SUSPENSIONS

	1932	1933
Licenses suspended	15,315	10,551
Licenses revoked	3,466	2,996
Rights suspended	4,651	4,402
Certificates suspended	0	1,127
Certificates revoked	48,417	57,802
Certificates and licenses suspended	22	17
Certificates and licenses revoked	1,435	1,359
Certificates revoked and rights suspended	123	107
Rights in Massachusetts suspended	82	70
Totals	73,511	78,431
Resulting from investigations	17,411	12,577
Resulting from Court convictions	8,196	7,603
Resulting from Police complaints	1,411	1,401
Resulting from Judges' complaints	21	25

P. D. 54		81
Resulting from State Police complaints . . .	210	104
Resulting from Insurance cancellations . . .	46,262	56,721
Totals	73,511	78,431

Character of Offenses

Reckless and endangering	1,845	1,572
Liquor convictions	3,899	3,601
Going away after accidents	335	332
Without authority	831	726
Racing	0	2
Improper person	5,562	5,059
Improper person, liquor	925	673
Two overspeeds	34	58
Three overspeeds	4	9
Improper operation	9,436	6,874
Insurance cancellations	46,262	56,721
Insurance convictions	375	387
Improper equipment, miscellaneous	138	208
Improper equipment, lights	166	334
Improper equipment, brakes	415	369
Failure to have stickers	2,157	181
Fatal accidents	728	734
Other offenses	399	362
Property Damage cases	0	229
Totals	73,511	78,431

Formal hearings	7,188	7,103
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Court recommendations adopted:—

Reckless and endangering	33	30
Going away after accidents	6	5
Without authority	2	0
Allowing improper person to operate	1	0
Totals	42	35

Persons whose licenses were suspended or revoked and who had to pass examination in order to have them returned	3,805	3,725
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ANALYSIS OF COURT ABSTRACTS RECEIVED

	1932	1933
Number of courts forwarding abstracts	95	95
Total abstracts received	51,329	46,381
Number of abstracts recording convictions	36,149	31,791

Offenses

(Analysis of convictions, not including appeals)

Overspeeding	11,366	9,453
Reckless	14	10
Operating under influence of liquor	3,486	3,334
Using auto without authority	1,194	925
Endangering lives	2,253	1,642
Not stopping after causing injury	591	571
Without license	2,985	2,600
Without registration certificate	802	704
Unregistered vehicle	395	386
Improper display or no register number	178	155
Refusing to stop on signal	298	431

82		P. D. 54
Unlighted lamps	500	444
Not signalling	0	1
Operating within 8 feet of street car	112	115
Violation of Metropolitan Park Rules	442	169
Operating after suspension or revocation of license	558	559
Larceny	115	129
Manslaughter	1	1
Miscellaneous	2,007	1,512
Lenses not approved	0	1
No reflector	0	7
Racing	1	4
Operating after registration certificate revoked	22	11
No rear light	36	45
Not displaying lights	0	31
Passing red light	130	522
Improper lights	356	212
Brakes not as required by law	237	226
Violation of Insurance Law	416	447
Not slowing down approaching pedestrian	60	19
Not slowing down at intersecting way	5,191	5,015
Violation of law of road	2,312	1,986
Perjury—Making false statements on license application, falsely impersonating or conspiring to obtain a license	17	18
Loaning a license to another	8	13
Allowing intoxicated person to operate	5	6
Attempted larceny	61	34
Allowing improper person to operate	0	53
Totals	36,149	31,791

USED CAR SECTION (Motor Vehicle Identification)

The following is a resume of the work accomplished by the Used Car Section which indexes, under engine numbers, all motor vehicles registered and reported stolen, and checks reports of sales of used cars against the stolen-vehicle records. Dealers' and repairmen's plates and registration certificates are issued by this section.

The work of the section is summarized in the following tables:—

	<i>Dealers</i>	1932	1933
Total number of first class dealers reporting		1,240	1,135
Total number of second and third class dealers reporting		468	519
Total number making reports to this office		1,708	1,654
	<i>Reports</i>		
Approximate number of notices of intended sales received daily		243	280
Approximate number of dealers' reports received daily		823	878
	<i>Motor Vehicles Stolen</i>		
Number stolen in Boston		4,901	5,108
Number stolen in Massachusetts (including Boston)		6,211	9,743
Number reported stolen from various sources throughout the country, including Massachusetts		23,902	25,505
Number of motor Vehicles recovered through information furnished by this office		423	368

Engine and Serial Numbers

Engine numbers assigned to cars	12	15
Certificates issued authorizing the replacement of engine numbers	456	370
Certificates issued authorizing the replacement of serial numbers	648	470
Certificates issued authorizing the replacement of both engine and serial numbers	19	15
Total number of authorization certificates issued	1,123	855

EASTERN CONFERENCE OF MOTOR VEHICLE ADMINISTRATORS

Two meetings of the Motor Vehicle Administrators were held in 1933, one, the Eastern Conference of Motor Vehicle Administrators, in Detroit, Michigan, on June 27, 28 and 29, and the other in Chicago, Illinois, at which time no representative of this Department attended either meeting on account of economic reasons. The American Conference of Motor Vehicle Administrators was organized at the Chicago Conference on September 29 and 30, and the Eastern Conference is now a division of it.

ANALYSIS OF RECEIPTS

The fees received for the year 1933, together with the number of certificates of registration issued in each classification and the number of licenses granted, etc., are shown in the following table:

Certificates of Registration:

Passenger cars including taxicabs)	816,302	\$2,428,075 95
Commercial cars	110,506	1,188,656 10
Buses	3,685	89,089 65
Trailers	525	30,741 50
Motor cycles	1,023	1,394 00
Manufacturers or Dealers (including repairers)	2,753	8,259 00
Manufacturers or Dealers additional cars (including repairers)	17,997	53,991 00
Licenses to operate:		
Original licenses	66,952 at \$2.00	133,894 00
Renewal licenses	955,710 at 2.00	1,991,223 50
Examinations	60,650 at 2.00	\$121,300
Re-examinations	14,338 at 1.00	14,338
Total examinations	74,988	135,638.00
Copies of certificates and licenses furnished	32,615 at \$1.00	32,615 00
Duplicate number plates furnished	8,685 at 1.00	8,685 00
Lens approval applications	3 at 50.00	150 00
Miscellaneous receipts, process fees, etc.		12,689 57
Total amount of fees		\$6,035,102 27
Motor Vehicle fees rebated (deducted)		61,866 57
Net fees		\$5,973,235 70
Court fines received by the Treasurer and Receiver-General		333,241 32
Total receipts (not including gasoline tax*) credited Highway Fund account, 1933		\$6,306,477 02

*Receipts from gasoline tax are credited to the Highway Fund but are collected through agencies other than the Registry.

EXPENSES OF THE REGISTRY OF MOTOR VEHICLES

The cost of running the Registry of Motor Vehicles for the year 1933 was \$1,434,382.44, which was 24% of the net fees collected. This cost, deducted from the receipts for the year, left the sum of \$4,872,094.58 available for legislative appropriation for highway work.

ANALYSIS OF EXPENDITURES FOR THE FISCAL YEAR 1933

Payrolls

Personal Services:

Regular payroll	\$899,054 11
Overtime payroll	7,845 75

 \$906,899 86
Expenses

Supplies:

Books, maps, etc.	\$820 99
Typewriter supplies	1,458 56
Adding machine repairs and supplies	109 41
Other supplies	2,607 25
Stationery	20,844 12
Typewriter repairs	118 66
Other repairs	652 11

 \$26,611 10

Equipment and Furniture:

Typewriter machines	\$3,233 55
Other machines	2,293 65
Desks	579 97
Bookcases, tables, etc.	1,146 49
Filing cabinets	13,529 82
Chairs	533 29
Dictograph	347 57
Branches—Safe	209 10
Headlight and Brake Testing Expense	19 00
Uniforms	4,609.05

 \$26,501 49

Traveling Expenses:

Officials	\$2,088.51
Employees	22,796 43
Aviation	2,763 97
Automobiles (owned by employees)	72,886 52
Automobiles (owned by State):	
Maintenance of 11 automobiles	3,014 38
Exchange of 3 automobiles	1,103 19
Purchase of 1 automobile	483 87

 \$105,136 87

Other Services and Expenses:

Expressage	2,973 09
Postage	92,019 16
Printing:	
Other reports	38 27
Other printing	8,066 00
Telephone	7,854 87
Premium on Bonds of Employees	391 21
Rent	11,500 00
Cleaning and Janitor Services	929 90
Rat Extermination	105 34
Labor	326 70
Number Plates	178,729 10
Direct Mail Lists	9,500 00
Sundries	238 86

Towels and Soap	578 39	
Water and Ice	581 60	
Expenses incurred by moving to new building:		
New Equipment	11,567 02	
Labor	5,993 45	
Branch Offices:		
Rent, Telephone, Lighting, Heating	27,488 27	
Labor and Services	7,506 11	
Supplies and Express	2,404 59	
		\$368,791 93
<i>Publicity for Safety Work</i>		
Labels	\$441 19	
		\$441 19
		\$1,434,382 44
<i>Summary</i>		
Payrolls		\$906,899 86
Expenses		527,041 39
Publicity for Safety Work		441 19
		\$1,434,382 44

RELATING TO WATERWAYS AND PUBLIC LANDS
BOSTON HARBOR

The Commonwealth Flats at South Boston

Commonwealth Pier 5

Work necessary to maintain the pier in condition for effective operation has been carried on as usual during the year. Repairs have been made to gangways, to fender logs and fittings, to roofing, flashing, downspouts and sash, to elevators and elevator machinery, to the sprinkler system and to the heating plant.

On June 6, 1933, a contract was made with A. A. Hersey and Son Company for furnishing, driving, fitting and securing new fender piles and new foundation piles, rebolting piles and belay posts, furnishing and securing new bracing, securing existing loose bracing, and other necessary timber work in the pile platform of the pier. This work is now in progress.

Early in the year requests were made for the cutting of an additional door on the second floor at the outer end of the pier to facilitate the embarking and disembarking of passengers from steamships using the outer berths when the inner berth is occupied. This door was provided for in a letter contract made June 20, with J. Edward Ogden Company for cutting out siding and framing a new door opening, removing a two section door and erecting it in the new opening, and for furnishing and installing a new three-section door in place of the two-section one, on the east side of the second floor of the pier at a contract price of \$1,818. This work was completed Oct. 5, 1933.

After the movable gangway, built last year at the outer end of the pier, had been in operation for some months, it became evident that the widening of the lower run would allow freer movement of the short gangway extending from the movable gangway to the ship docking at the pier. For this widening and for certain changes in the open observatory where the movable gangway meets the second floor of the pier, the two following contracts were made.

On Sept. 13, 1933, a contract was made with the Waghorne-Brown Company to remove a portion of the parapet wall on the observation platform at the outer end of the pier, to provide an opening 30 feet 6 inches wide, and to furnish and to erect a steel fence to close the opening, for the lump sum of \$322. The work was completed Nov. 10, 1933.

A contract was made on Sept. 13, 1933, with the Waghorne-Brown Company to make alterations to the movable gangway at the pier, by changing the width of the lower ramp from 4 feet to 8 feet, and making alterations in the upper ramp by the construction of new crickets to adjust the gangway to alterations in the parapet coping. The contract price for this work is the lump sum of \$1,044. The work was completed Nov. 10, 1933.

On Sept. 20, 1933, a contract was made with Louis P. Steensen for cleaning and painting all exterior structural steel work on the sides and outer end of the pier for the lump sum of \$1,720. Later this contract was extended to include painting the rooms and corridors in the head house. The work is now in progress.

A letter contract was made with George T. McLauthlin on Nov. 21, 1933, for installing sixteen elevator gates on four elevators at the pier for the sum of \$2,400.

During the summer the offices at the pier occupied by the engineers of the Department and by the registry of motor vehicles were vacated for space in the Public Works Building at 100 Nashua Street. This change releases practically the entire pier for shipping, cargo and passenger use. Some office partitions have been removed and openings made in others by the operating force so that cargo may be more easily transferred into certain parts of the area vacated.

Captains of the large passenger liners using the pier have expressed considerable concern lest a combination of a strong westerly wind with an ebb tide should cause a vessel heading for the east berth to strike or ground upon the bank in front of the Fish Pier. To reduce this hazard a contract was made on Sept. 26, 1933, with the Bay State Dredging and Contracting Company for dredging to a depth of 35 feet at the mean low water, an area to widen the approach to the east berth of the pier, at the following contract prices: for dredging and disposing of the dredged material, 43 cents per cubic yard, scow measurement; for removing and disposing of boulders, \$20 per cubic yard. This work is now in progress.

A summary of freight and passengers using the pier in 1933 follows:

FREIGHT AND PASSENGERS AT COMMONWEALTH PIER NO. 5 DURING
FISCAL YEAR ENDING NOVEMBER 30, 1933

Name of SS. Line	No. of Ships	In Fgt. RR. (Tons)	Trucks (Tons)	Total Tonnage	Out Fgt. RR. (Tons)	Trucks (Tons)	Total Ton- nage	Passengers		Total
								In	Out	
Am. Haw. SS. Co. .	102	18,570	105,386	123,956	7,487	30,847	38,334	-	-	-
Luckenbach SS Co. Inc.	71	8,040	53,114	61,154	3,797	14,112	17,909	-	-	-
Norton, Lilly & Co. .	64	1,721	10,985	12,706	523	4,129	4,652	-	-	-
White Star Line .	41	962	5,564	6,526	1,556	1,237	2,793	2,844	3,007	5,851
Canadian Nat. SS. Co..	77	-	-	-	-	-	-	2,068	1,888	3,956
Italian Line . .	16	-	34	34	-	80	80	-	2,167	2,167
Hamburg-Amer. Line .	4	-	-	-	-	-	-	125	209	334
Byron SS. Co. . .	9	-	-	-	-	-	-	-	759	759
Norton Lilly & Co. (Foreign) . .	1	243	10	253	-	-	-	18	-	18
SUMMARIES .	385	29,536	175,093	204,629	13,363	50,405	63,768	5,055	8,030	13,085

DEVELOPMENT OF LAND SOUTH OF SUMMER STREET

During the year the seven sections in Storehouse No. 1 on E Street have been occupied by the Wiggin Terminals, Inc. Minor repairs have been made to the warehouse as they became necessary.

In accordance with the terms of the agreements of May 10 and June 7, 1932, the Department relinquished early in the year sections M and N of the D Street Storehouse, leaving the entire building to the Economy Grocery Stores Corporation.

A few months later the Corporation began negotiations for the purchase of a parcel of land containing about 36,275 square feet off D Street and southerly of the property of George C. Corcoran. An agreement under date of Oct. 3, 1933, was approved by the Governor and Council on Oct. 18, for the sale of this land to the Economy Grocery Stores Corporation. The instrument provides that the land becomes the property of the Corporation upon the completion of the payment of \$21,764.99 in nine annual payments, including interest each year upon the unpaid balance.

Under date of August 29, 1933, a lease was granted to the United States of an area about 800 feet by 600 feet at Marine Park, South Boston, and of a right of way from Farragut Road, to allow the establishment of a "T S" radio range station. This lease carries an option of annual renewals to June 30, 1943.

GRASSELLI WHARF

This wharf has been used during the year by various owners for tying up motor boats and other craft. A part of the land and pier has been occupied by a gasoline filling station. The entire property is available for lease.

THE COMMONWEALTH FLATS AT EAST BOSTON

Aircraft Landing Field — Boston Airport

The greater part of the area reclaimed by the Commonwealth at East Boston continues to be occupied by the city of Boston as an airport. On Aug. 10, 1928, under authority of Chapter 64 of the Resolves of that year, the Department leased to the City approximately 5,717,000 square feet of land for this purpose. The use of an additional area of 4,210,760 square feet was authorized by a lease executed July 14, 1930, in accordance with the provisions of Chapter 53 of the Resolves of 1930. The matter of the lease to the city of two additional parcels, one northeasterly of the areas leased in 1928 and 1930, the other southeasterly of the parcel leased in 1930, is now pending.

The use of these areas by the City is subject to certain rights of occupancy and use granted by lease of June 30, 1922, to the War Department, with an option of annual renewals extended to June 30, 1937, by a supplementary agreement of Dec. 27, 1926.

RECLAMATION OF FLATS

The work of dredging and filling at East Boston under contracts made by the Department for the purpose of reclaiming flats has been in abeyance since 1923. Between that year and Nov. 30, 1933, approximately 2,681,000 cubic yards of material dredged from various locations in the harbor have been deposited in the receiving basin. In the year ending Nov. 30, 1933, approximately 83,900 cubic yards were dumped upon flats northerly of Governor's Island. The Commonwealth has reclaimed about 150 acres of land at East Boston.

Under licenses granted in 1930 and 1931, for the building of bulkheads, dredging and filling, the City of Boston has reclaimed for the extension of the Airport an area of approximately 140 acres.

COMMONWEALTH PIER 1, EAST BOSTON

During the greater part of the year the east and west docks of this pier have been used by the Eastern Steamship Lines, Inc., for tying up steamers when not in service.

Under date of Nov. 6, 1933, a lease of this pier was executed to John G. Hall and Company, Inc., for a period beginning Nov. 1, 1933 and ending October 31, 1934, with an option of renewal for one year at the same terms. The lease provides for a rental of \$6,000 yearly plus accruments on all cargo in or out of the pier and on all cargo interchanged between vessel and pier or lighter or other vessel, as follows: annually ten cents per ton of 2,240 pounds up to 15,000 tons; five cents per ton of 2,240 pounds from 15,000 to 40,000 tons; and two and one-half cents per ton of 2,240 pounds on all cargo over 40,000 tons.

The instrument provides that the pier shall be used exclusively for waterborne commerce and that no storage warehouse business shall be carried on upon the premises.

On Nov. 28, 1933, a contract was made with Waghorne-Brown Company for the construction and erection of sixteen sliding steel doors to replace wooden (cargo) doors at this pier, at a contract price of \$143.37 for each door furnished and erected.

BOSTON HARBOR — REMOVAL OF ABANDONED HULKS OR WRECKS

By Chapter 89 of the Acts of 1933, an appropriation of \$50,000 was made for removing abandoned hulks or wrecks lying along the waterfront of Boston Harbor. An additional appropriation of \$25,000 for this purpose was made by Chapter 371 of the Acts of 1933. This work has been carried on during the year under the following contracts.

On Apr. 4, 1933, a contract was made with the Bay State Dredging and Contracting Company for removing several hulks from Boston Harbor, in areas near Chelsea Bridge, off the foot of Hanover Street and westerly of the steamboat wharf in Winthrop Harbor, at a contract price of the lump sum of \$2,700. This work was completed Apr. 17, 1933.

A contract was made on Apr. 18, 1933, with Roy B. Rendle and Company, Inc., for the removal of several hulks with their debris and of old piles from property of the Boston Port Development Company at Condor Street, East Boston, at a lump sum price of \$3,800 for removing and disposing of hulks, and of \$600 for pulling and disposing of piles. This work was completed June 19, 1933.

On Apr. 25, 1933, a contract was made with The Rendle Corporation to remove several hulks from Chelsea Creek on property of the Boston Port Development Company adjacent to Putnam and Condor Streets, East Boston, at a contract price of \$1,800 for removal and disposal of the hulks. Under date of June 7, 1933, the contractor was directed to remove for the sum of \$400 all additional hulks or wrecks encountered in the course of the work. The removal of hulks under this contract was completed July 12, 1933.

A contract was made on Aug. 1, 1933, with John Forward for the removal of hulks or wrecks from Chelsea Creek adjacent to Condor Street near Glendon Street, East Boston. The contract prices for this work are: for the removal and disposal of the steel hulk formerly known as the "Yankton", \$500; for the removal and disposal of all hulks or wrecks or parts of hulks or wrecks, except the steel hulk "Yankton", the lump sum of \$2,900. Work under this contract is not yet completed.

On Aug. 29, 1933, a contract was made with the M & R Construction Company for the removal of several wrecks and debris from Chelsea Creek on property of the Boston Lockport Block Company, East Boston, and the Quincy Oil Company, Chelsea, and from the site of the old Chelsea Ferry in Boston Harbor on property of Etta C. Lowell. The

contract price for this work is the lump sum of \$1,495. This work is now in progress.

In order to give, in accordance with the intent of Chapter 89 of the Acts of 1933, as much relief as possible to unemployment, material from the wrecks removed was placed on shore at various locations along the water front. The breaking up of this material provided work for additional labor for about 15,800 man days.

ANCHORAGE BASIN

On June 13, 1933, a contract was made with the M. and R. Construction Company to furnish, drive and secure piles to rebuild Dolphin "A" on the northerly edge of the anchorage basin at Bird Island Flats, for the lump sum of \$175. This work was completed in July 26, 1933.

BOSTON INNER HARBOR

In January request was made for further dredging at the mouth of Fort Point Channel between Pier 1 of the New York, New Haven and Hartford Railroad Company and Rowe's Wharf and Fosters Wharf, in order to provide more convenient access for steamers using the piers on Atlantic Avenue.

A contract was made on Sept. 26, 1933, with the Bay State Dredging and Contracting Company to dredge to a depth of 25 feet at mean low water an area off the entrance to Fort Point Channel at the following contract prices: for dredging and disposing of dredged material, 37 cents per cubic yard, scow measurement; for removing and disposing of all boulders, \$20 for each cubic yard. This work is now in progress.

MYSTIC RIVER DREDGING

In August of this year a request was received from the Merrimac Chemical Company for dredging in Mystic River just above Malden Bridge to prevent the grounding of vessels turning from the main channel into the channel leading to property of the Company.

On Oct. 10, 1933, a contract was made with the Bay State Dredging and Contracting Company to dredge to a depth of 16 feet at mean low water an area approximately 750 feet long and 90 feet wide in Mystic River above Malden Bridge, at the following contract prices: for dredging and disposing of the dredged material 41 cents for each cubic yard, scow measurement; for removing and disposing of boulders, \$20 per cubic yard. This work is now in progress.

PLEASANT PARK, WINTHROP

On Jan. 25, 1933, hearing was held upon the petition of the Pleasant Park Yacht Club for dredging a channel in Belle Isle Inlet from Nun Buoy No. 6 to the basin and channel leading to the Pleasant Park Yacht Club and to the adjacent boat yard.

A contract was made on Nov. 28, 1933, with the Bay State Dredging and Contracting Company for dredging a channel at Pleasant Park about 60 feet wide and 3,800 feet long to a depth of 6 feet at mean low water at the following contract prices: for dredging and disposing of dredged material 38 cents per cubic yard, scow measurement; for removing and disposing of boulders \$20 per cubic yard. This work has not yet begun.

SOUTH BAY

On May 2, 1933, a lease was given to the Downes Lumber Company to continue for a term of five years from May 15, 1933, its occupancy of certain wharf property of the Commonwealth at South Bay, Roxbury, at a rental of \$2,400 per year.

STONY BEACH, HULL

By Chapter 330 of the Acts of 1933 the Department is authorized to place riprap for the protection of Stony Beach from erosion by the sea, at a cost of not more than \$16,000. The statute provides that no work shall be begun until the town of Hull has assumed liability, in the manner provided by section 29 of Chapter 91 of the General Laws, for all damages that may be incurred, nor until the sum of \$4,000 each has been paid into the State Treasury by the town and by the County of Plymouth. This act takes full effect upon its acceptance during 1933 by vote of the County Commissioners of Plymouth County and by vote of the town of Hull in town meeting and the filing in the office of the Department of certified copies of these votes.

In August a certified copy of a vote of the County Commissioners at a meeting held Aug. 8, 1933, accepting the provisions of the Act, was filed with the Department, and a certified copy of the vote of the town at a meeting held Sept. 21, 1933, in acceptance of the statute, was received later.

Not until Oct. 31, 1933, however, did the town of Hull vote to assume liability for damages, as required by the Act, and to authorize the Selectmen to execute the necessary bond of indemnity.

The contributions of \$4,000 each from the town and county were received in November, but no contract for the work has yet been made.

WOLLASTON DREDGING

By Chapter 222 of the Acts of 1932, the Department is authorized to dredge a channel to a depth of not less than 6 feet at mean low water, from Quincy Bay southwesterly to the area in front of the Wollaston Yacht Club and the Squantum Yacht Club, and to dredge a basin in said area. The statute limits the total expenditure to \$12,000 and provides that no work shall be begun until the City of Quincy has paid into the State Treasury a contribution of \$3,000.

Upon the receipt of the required contribution on June 5, 1933, a contract with the Bay State Dredging and Contracting Company was made on June 6, 1933, to dredge to a depth of 6 feet at mean low water a basin and channel at the Squantum and Wollaston Yacht Clubs, the basin 600 feet on the southerly side, 120 feet on the westerly end, and 300 feet on the easterly end, narrowing into an approach channel 75 feet wide on the bottom, to be dredged northerly from the basin for such length as funds available permit. The contract prices are: for dredging channel and basin and disposing of dredged material, 38 cents per cubic yard, scow measurement; for removing and disposing of boulders, \$10 per cubic yard. This work was completed July 11, 1933, at a contract cost of \$11,893.62.

SURVEYS

During the year re-surveys were made of wharf and shore lines along parts of Mystic River in Charlestown, Somerville and Medford, of Chelsea Creek in East Boston and Chelsea, and of Charles River in Boston and Cambridge.

Hydrographic surveys have been made in various locations in Boston Harbor, in Mystic River between Malden Bridge and the Eastern Division Bridge of the Boston and Maine Railroad, in Charles River between the Boston and Maine Railroad Bridge and the Charles River Dam, in Dorchester Bay near the Old Colony Yacht Club, and in Quincy Bay at the Squantum and Wollaston Yacht Clubs.

RIVERS, HARBORS, TIDE WATERS AND FORESHORES OUTSIDE OF BOSTON HARBOR

For the improvement of rivers, harbors, tide waters and foreshores outside of Boston Harbor, in accordance with the provisions of section 11, chapter 91, General Laws, an appropriation of \$25,000 was made during 1931, with the following condition:—

“provided, that all expenditures made for the protection of shores shall be upon condition that at least fifty per cent of the cost is covered by contributions from municipalities or other organizations and individuals and that in the case of dredging channels for harbor improvements at least twenty-five per cent of the cost shall be so covered.”

An appropriation of \$22,500 was also available during the year for the maintenance of structures, and for repairing damages along the coast line or river banks of the Commonwealth, and for the removal of wrecks and other obstructions from the tide waters and great ponds.

Petitions were filed with the Department during the year for surveys and improvements in the following localities: Allens Harbor, Harwich; Bathhouse Beach, West Dennis; Falmouth Inner Harbor, Falmouth; Harwich Shore Protection; Herring River Dike, Wellfleet; Horse Grass Island, South Harwich; Humarock Beach, Scituate; Ipswich River, Ipswich; Nobscusset Harbor, Dennis; Sagamore Beach, Bourne; Sengekontacket Pond, Oak Bluffs; South Dennis Shore, Dennis; Stage Harbor, Chatham; Witchmere Harbor, Harwich.

Public hearings have been held, certain estimates of cost made, but no work has been done to carry out the improvements petitioned for in Horse Grass Island, South Harwich; Humarock Beach, Scituate; Ipswich River, Ipswich; Sagamore Beach, Bourne; Sengekontacket Pond, Oak Bluffs; Stage Harbor, Chatham.

Information relating to work previously done in various rivers and harbors of the Commonwealth may be found in the annual reports of the Board of Harbor and Land Commissioners, the Commission on Waterways and Public Lands, the Division of Waterways and Public Lands of the Department of Public Works, and in the tables of the Appendix accompanying the present report. These tables show localities, character of work, appropriations and expenditures by the Commonwealth, and certain appropriations and expenditures by the Federal Government.

An account of work done during the year 1933 for the improvement of rivers, harbors, tide waters and foreshores outside of Boston Harbor follows:

ALLENS HARBOR, HARWICH

Hearing was held on Jan. 25, 1933, on petitions of the Selectmen of Harwich and of E. O. Engstrom for repairs to the stone jetties at the entrance to Allens Harbor.

A contract was made on Mar. 14, 1933, with Joseph W. Nickerson for placing stone riprap and chips to reinforce and strengthen the existing timber jetties, at a contract price of \$3.19 per ton for riprap or stone chips furnished and placed in the completed work. Under this contract work was completed May 17, 1933, at a contract cost of \$11,847.13. Toward this cost a contribution of \$3,000 was made by the town of Harwich and one of \$3,500 by the Allen's Harbor Properties, Inc.

While the jetties at the entrance to the harbor are now in excellent condition, the movement of material into the channel before repairs were made has caused considerable shoaling. Dredging is now needed to restore a suitable depth in this channel.

Amount expended during the year, \$12,438.63. Total expenditure to Dec. 1, 1933, \$51,146.43.

CAPE COD CANAL LANDING PIER

The work of building in the Cape Cod Canal at Bourne Neck, the landing pier authorized by Chapter 441 of the Acts of 1931, has continued during 1933.

Under contract of Apr. 26, 1932, with the Merritt-Chapman and Scott Corporation for building the pier, dredging a berth, approach channels and turning basin, and constructing mooring dolphins and appurtenances, work was completed Mar. 25, 1933, at a contract cost of \$215,500.95.

On May 2, 1933, a contract was made with the Pasquale Construction Company, Inc., for the construction of a concrete retaining wall about 310 feet long around the raised portion of the pier, of concrete steps and ramps, for the furnishing and laying of about 120 feet of 6 inch and 80 feet of 2 inch water pipe, and for the setting of one hydrant and check valve for fire service, at the Cape Cod Canal Pier. This work was completed June 29, 1933, at a contract cost of \$1,737.75.

On June 6, 1933, a contract was made with the Waghorne-Brown Company to construct two moveable gangways in the drops of the Cape Cod Canal Pier at a contract price of the lump sum of \$2,645 for furnishing the two gangways and erecting them in place ready to operate. During the progress of the work it was found advisable to install a locking device at an additional cost of \$175. Work under this contract was completed Aug. 31, 1933.

Plans and estimates were prepared in the spring for building different types of superstructures upon the pier. As the funds at the disposal of the Department were limited, it became evident that the architectural style of structure desired by local interests could not be built for the money available. Under the provisions of Chapter 227 of the Acts of 1933, an additional appropriation of \$12,500 was made to permit the construction of a brick building of the type approved by the communities particularly interested in the matter.

A contract was made on June 6, 1933, with the Durso Construction Company for the construction of a building approximately 220 feet long and 35 feet wide at the Cape Cod Canal Pier for the lump sum of \$21,378. In July the contractor was authorized by the Board to substitute in the construction for the blue monson slate specified, an unfading green slate at an additional cost of \$644. The work under this contract is now nearing completion.

On July 25, 1933, a contract was made with the Mass. Electric Construction Company to furnish and install complete a lighting and power service in the building and pier at the Cape Cod Canal Pier, for the lump sum of \$1,239. An additional expenditure of \$64 was authorized later under this contract to provide for installing two lightning ground pipes. This work was completed Oct. 24, 1933, at a contract cost of \$1,292.12.

While not entirely completed and equipped the landing pier could be used by vessels in the spring of this year. As many inquiries were made by steamboat companies concerning charges for the use of the pier, the Board established temporary rates approved by the Governor and Council Mar. 29, 1933, and effective Apr. 1, 1933. These regulations are now in force but will be superseded later by permanent rates.

The pier as now completed provides dockage on the main frontage for a length of 600 feet with a depth of 25 feet at mean low water. There is also a tieup about 550 feet long on the westerly end and a depth of 23 feet at mean low water. As yet, the use made of the pier has been principally for the landing of excursion parties, although one small steamer was operated during the fall to carry shipments of freight to New York. At present the tying up at the pier of contractors' equipment has facilitated the work of the Federal Government in dredging operations in the Cape Cod Canal.

Amount expended during the year for construction \$87,469.35, for operation and maintenance \$2,135.46. Total expenditure to Dec. 1, 1933, for construction \$258,362.64, for operation and maintenance \$2,135.46.

CONNECTICUT RIVER, HADLEY

Hearing was held Oct. 4, 1933, on the petition of the Chairman of Selectmen of Hadley for the building of a dike for the protection of property from damage by the overflow of the Connecticut River.

Toward the cost of the work a contribution of \$2,000 was made by the town of Hadley. The construction is now being carried on by local labor, in accordance with the request of the Selectmen.

Amount expended during the year, \$3,214.09. Total expenditure to Dec. 1, 1933, \$121,955.04.

CUTTYHUNK HARBOR, GOSNOLD

Chapter 179 of the Acts of 1933, authorizes the Department to dredge and enlarge the harbor in the town of Gosnold at an expenditure not exceeding \$10,000, provided a contribution of 10% of the cost of the work is made, and the town assumes liability for damages.

At a town meeting held May 26, 1933, the town voted to assume liability for damages in accordance with the provisions of the act, and in June sent the required contribution of \$1,000.

A contract was made on June 27, 1933, with the Saybrook Dredging Company for dredging in Cuttyhunk Harbor a channel 75 feet wide on the bottom and 10 feet deep at mean low water, and to the same depth a basin 300 feet wide and 500 feet long on the bottom at the following contract prices: for dredging and disposing of the excavated material on shore by the hydraulic process, including construction of necessary dikes and sluices, 28.8 cents per cubic yard measured in situ; for removing and disposing of boulders \$10 per cubic yard. This work was completed Sept. 9, 1933, at a contract cost of \$9,160.70.

After the completion of the dredging the engineer reported that shoaling in this harbor is chiefly due to the passing of sand over the top of the northerly jetty and recommended the building of a concrete wall on the stone work of this jetty. As the materials needed are available a short distance from the jetty, it was suggested that the project be carried out on a day basis by using local labor. This work has been authorized by the Board and is now in progress by the method suggested.

Amount expended during the year, \$12,846.93. Total expenditure to Dec. 1, 1933, \$83,935.78.

DENNIS SHORE

Hearing was held Jan. 25, 1933, on the petition of George F. James and Mary Buckley for the building of a stone jetty on the easterly side of property of Fred H. Buckley at Dennisport to check the erosion taking place along the shore.

On Aug. 15, 1933, a contract was made with Sidney W. Lawrence for the construction of a stone jetty at Dennisport at a contract price of \$3.12 for each ton of 2,000 pounds of stone riprap and granite chips furnished and placed in the jetty. This work was completed Oct. 14, 1933, at a contract cost of \$1,007.76. Toward this cost a contribution of \$600 was made by the owners of property involved.

On Sept. 6, hearing was held upon the petition of the Selectmen of Dennis for the protection of the shore westerly of Nobscusset Harbor.

On Sept. 19, 1933, a contract was made with Sidney W. Lawrence to construct two stone jetties west of Nobscusset Harbor at a contract price of \$3.10 for each ton of stone riprap furnished in place in the completed work. Toward the cost of these jetties a contribution of \$600 each has been made by the town of Dennis and by the County of Barnstable. This work is now in progress.

Hearing was also held on Sept. 6, 1933, upon the request of the town officials for protection of the property of the town at Bathhouse Beach, West Dennis, from erosion by the sea.

On Nov. 28, 1933, a contract was made with Sidney W. Lawrence to build a stone jetty at this beach at a contract price of \$3.10 for each ton of stone riprap and granite chips furnished and placed in the jetty.

Toward the cost of this work a contribution of \$375 has been made by the Town, and an equal amount by the county.

Amount expended during the year, \$884.95. Total expenditure to Dec. 1, 1933, \$884.95.

ELLISVILLE HARBOR, PLYMOUTH

For some years the work of repairs at this harbor has been carried out by local labor under the general direction of the Department. During the current year the dike and the timber work in the jetty have been repaired by this method.

A letter contract of June 21, 1933, was also made with Arthur K. Finney to furnish a caterpillar crane and excavate the entrance channel at a price of \$4 per hour. This work was completed July 13, 1933, at a contract cost of \$200.

Amount expended during year, \$499.40. Total expenditure to Dec. 1, 1933, \$20,673.58.

FALMOUTH INNER HARBOR

Hearing was held on Aug. 16, 1933, on the petition of the Selectmen of Falmouth for widening and deepening the entrance from Vineyard Sound into Falmouth Inner Harbor.

A contract was made on Sept. 5, 1933, with the Bay State Dredging and Contracting Company for dredging in the entrance channel to a depth of 10 feet at mean low water and a width of 100 feet on the bottom at the following contract prices: for dredging and disposing of the dredged material 47 cents per cubic yard, scow measurement; for removing and disposing of boulders \$20 per cubic yard. This work was completed Oct. 4, 1933, at a contract cost of \$3,611.48. Toward this cost a contribution of \$2,000 was made by the town of Falmouth.

Amount expended during the year, \$3,883.37. Total expenditure to Dec. 1, 1933, \$154,279.63.

GREEN HARBOR, MARSHFIELD

On Dec. 27, 1932, a contract was made with Thomas Whalen & Sons, Inc., for placing about 600 tons of stone riprap to protect the shore, adjacent to the northerly end of the east jetty at the entrance to Green Harbor, at a contract price of \$1.88 for each ton of stone riprap or chips furnished in place in the completed work, including all excavation, backfilling and incidental work. This project was completed Feb. 25, 1933, at a contract cost of \$1,341.43.

Amount expended during the year, \$1,769.01. Total expenditure to Dec. 1, 1933, \$167,238.38.

GUN ROCK — GREEN HILL SEA WALL, HULL

The building of eight concrete spur jetties and the placing of a concrete footing in front of a part of the sea wall between Gun Rock and Green Hill, under contract of Oct. 25, 1932, with Thomas Whalen and Sons, Inc., was completed Dec. 29, 1932, at a contract cost of \$1,095.22.

On Mar. 15, 1933, a letter contract was made with George W. Starbuck for repairs to a damaged portion of the sea wall, at a contract price of \$980. This work was completed Apr. 21, 1933.

In October letters were received from property owners complaining of the condition of parts of this wall and asking further protection for the shore. The Department offered to place riprap at an estimated cost

of \$2,500 upon receipt of a contribution of one-half this cost. The town has voted to make the necessary appropriation, but, on account of the objection made by some of the property owners to the use of riprap along this shore no further action has been taken.

Amount expended during the year, \$2670.29. Total expenditure to Dec. 1, 1933, \$42,093.96.

HARWICH SHORE PROTECTION

The work of building a stone jetty at West Harwich under contract of Nov. 9, 1932, with Sidney W. Lawrence was completed Dec. 17, 1932, at a contract cost of \$714.43.

Hearing was held Jan. 25, 1933, on petitions of the Selectmen of Harwich for further shore protection.

In October the Barnstable County Commissioners voted to make a contribution of \$2,000 toward the cost of shore protection, to be used with the appropriation of an equal amount by the town. Proposals for building seven jetties on the beach east of Allens Harbor, for extending the jetty and placing riprap at West Harwich, and for repairs to jetty and riprap at South Harwich, are to be received early in December.

Amount expended during the year, \$1,070.59. Total expenditure to Dec. 1, 1933, \$31,822.24.

HERRING RIVER, HARWICH

On Feb. 7, 1933, a contract was made with Arthur K. Finney to furnish and place sand along the easterly shore of Herring River, Harwich, on property of Charles E. LeBuff, for the lump sum of \$572. Work was completed Apr. 6, 1933, at a contract cost of \$572. Toward this cost a contribution of \$300 was made by the town of Harwich.

Complaints were received in June of shoaling at the mouth of Herring River in an amount sufficient to prevent the entrance of yachts accustomed to use this harbor. As the dredging plant of the Saybrook Dredging Company was just completing dredging at Witchmere Harbor, a letter contract with this Company was made on July 7, 1933, for dredging the entrance channel to Herring River 100 feet wide and 6 feet deep at mean low water at a contract price of \$1,800. This work was completed July 14, 1933.

Amount expended during the year, \$2,690.61. Total expenditure to Dec. 1, 1933, \$134,720.58.

HERRING RIVER, WELLFLEET

Chapter 217 of the Acts of 1933 authorizes the Department, for the purpose of providing better drainage above the dike across the mouth of Herring River, to make, in consultation with the State Reclamation Board, such changes as appear necessary in the dike and its appurtenances, and to dredge or clear all obstructions in the channels above the dike at an expenditure not exceeding \$10,000.

Repairs and changes in the dike by the use of local labor in charge of an inspector from the Department, have been made in accordance with plans agreed upon by the Department of Public Works and by the State Reclamation Board. This part of the work has cost approximately \$3,000.

In repairing the dike sections of the floor have been removed and the area beneath has been filled with concrete to seal leaks causing damage to the structure. A section of the upper part of the timber sluices was also removed and replaced by a reinforced concrete slab. The two tide gates were changed to permit discharge of water under a smaller head, and the sluice gate was replaced by the so-called "barn-door" type gates. As a result of these changes the discharge of water through the dike has been increased about fifty percent. This additional discharge area will maintain the water level of the pond above the dike at a lower elevation

which will facilitate the flow from the more remote portions of the marsh land drained by Herring River.

To carry out the drainage work above the dike, the two Boards have decided to hire on an hourly basis a caterpillar crane, including an operator and fuel, and to secure from local sources the additional labor required. This method permits of greater flexibility and allows changes from day to day as conditions necessitate. This work is now in progress.

Amount expended during the year, \$4,811.12. Total expenditure to Dec. 1, 1933, \$39,320.50.

HYANNIS HARBOR, BARNSTABLE

The work under contract of June 28, 1932, with Thomas Whalen and Sons, Inc., for building about 900 linear feet of creosoted timber bulkhead, was completed Dec. 10, 1932, at a contract cost of \$10,699.10.

The dredging of three areas in the harbor under contract of Aug. 9, 1932, with the Saybrook Dredging Company was completed May 13, 1933, at a contract cost of \$23,766.08.

The laying of pipes and building of four catch basins at the town landing east of Ocean Street under contract of Oct. 4, 1932, with Thomas Whalen and Sons, Inc., was completed Nov. 26, 1932, at a contract cost of \$821.50.

The work under the various contracts has provided a channel with a depth of 9 feet at mean low water from the outer harbor to the harbor head, and additional anchorage areas 6 feet deep at mean low water. The bulkhead now offers facilities for tying up yachts and fishing vessels of a draft of not more than 9 feet.

Amount expended during the year, \$29,246.94. Total expenditure to Dec. 1, 1933, \$40,494.50.

LAGOON POND, OAK BLUFFS AND TISBURY

Work under contract of Aug. 23, 1932, with Merritt-Chapman and Scott Corporation for dredging a channel at the entrance to Lagoon Pond and for building a stone jetty on the easterly side of the entrance was completed Dec. 21, 1932, at a contract cost of \$24,101.16.

The completion of this project has provided an entrance channel 6 feet deep at mean low water into Lagoon Pond, and a jetty of much value in improving the channel depth and causing the accretion of material along the Oak Bluffs shore where erosion has been rapid for many years.

Amount expended during the year, \$9,379.86. Total expenditure to Dec. 1, 1933, \$25,855.90.

LONG BEACH, ROCKPORT

The sea wall built by the Commonwealth in 1931 along this beach was somewhat damaged by the storm of Jan. 25-28 of this year, making it necessary to place a concrete footing under a part of the structure and riprap protection along the toe.

Under a letter contract of Feb. 21, 1933, with Napoleon J. Loran-deau a concrete footing was placed under about 250 feet of this wall. The work was completed Mar. 11, 1933, at a contract cost of \$1,030.66.

On Apr. 25, 1933, a contract was made with Thomas Whalen and Sons, Inc., for furnishing and placing about 2,000 tons of stone riprap and chips to protect the face of a portion of the concrete sea wall at Long Beach at a contract price of \$1.43 per ton for riprap or stone chips furnished and placed in the completed work. This project was completed June 2, 1933, at a contract cost of \$3,134.74. Toward this cost a contribution of \$1,700 was made by the town of Rockport.

Amount expended during the year, \$4,790.25. Total expenditure to Dec. 1, 1933, \$57,306.56.

MARSHFIELD SHORE PROTECTION

Under the provisions of Chapter 407 of the Acts of 1931, protective work along the Marshfield shore has been continued during the year.

The building of the sea wall south of the U. S. Coast Guard Station at Brant Rock, under contract of Sept. 27, 1932, with A. Piatelli and Company was completed Jan. 2, 1933, at a contract cost of \$8,643.15.

To repair damage caused by the storm of Jan. 25-28, a letter contract was made on Feb. 14, 1933, with Frank H. Barry to place concrete footing under the wing wall at the northerly end of the sea wall at Fieldstone. This work was completed Mar. 20, 1933, at a contract cost of \$1,260.32.

On June 6, 1933, a contract was made with the Corsetti and Arcese Company for building about 400 linear feet of concrete sea wall, about 115 feet of reinforced concrete footing and about 250 linear feet of reinforced concrete cap and back to old masonry wall. and for backfilling about 250 linear feet of wall, at Brant Rock. The contract prices for this work are: for furnishing material and constructing the concrete sea wall, including all excavation, backfilling, removing old walls and all incidental work, \$7.32 for each cubic yard of concrete measured in the completed work; for furnishing material and constructing the reinforced concrete footing, including all excavation, filling and backfilling, removing old walls or structures and all incidental work, \$8.00 for each cubic yard of reinforced concrete measured in the completed work; for furnishing material and constructing the reinforced concrete cap, backing and steel dowels, including all excavations, backfilling, and all incidental work, \$8.60 for each cubic yard of reinforced concrete in the completed work; for each cubic yard of filling material furnished, delivered and measured in place in the completed work 40 cents. This work was completed Aug. 30, 1933, at a contract cost of \$7,880.63.

Amount expended during the year, \$14,692.35. Total expenditure to Dec. 1, 1933, \$229,665.64.

NAHANT SHORE PROTECTION

By Item 591a of Chapter 371 of the Acts of 1933 an appropriation of \$15,000 is made available for shore protection in Nahant as soon as the town pays an equal sum into the State Treasury.

The town made the required contribution in August, and contract was made on Oct. 10, 1933, with the M. McDonough Company to place about 14,000 tons of heavy stone riprap for the protection of about 2,400 linear feet of shore on the westerly side of Nahant Road, at a contract price of \$1.18 for each ton of stone riprap furnished in place in the completed work.

This work is now in progress.

Amount expended during the year, \$2,296.28.

NEW BEDFORD STATE PIER

Because of the landing of unusually large cargoes of cotton at the State Pier early in the year, the commercial and shipping interests of New Bedford asked for an increase in the covered area for the receipt of goods, in order that proper protection might be assured while cargo was waiting for shipment.

At about this time also the Lamport Manufacturing Supply Company, Inc., requested a reduction in the rental which this year increased from \$6,000 to \$10,000 per annum under the terms of the lease of July 29, 1927, of a portion of the pier.

At the request of the Mayor and Aldermen under the provisions of Chapter 375 of the Acts of 1920, a public hearing was held on these matters in New Bedford on Mar. 23, 1933. At the hearing and at various

conferences held relative to the situation, it was evident that while the City authorities and the Board of Commerce wished to secure more space for cargo at the pier, they were desirous of retaining for the city the industry carried on at the pier by the Lamport Manufacturing Supply Co., Inc. This industry was considered of particular value to the city at this time because of the employment it provides for local workers.

After consideration of all the circumstances the Department suggested that a new lease be executed requiring the Company to surrender for shipping and cargo purposes a part of the northerly platform in the wooden shed on the pier, and granting in return for this concession a reduction in rental sufficient to ensure the continuance of the industry desired by the city. Under date of Apr. 27, 1933, an indenture was executed abrogating by mutual agreement the lease of July 29, 1927, and negotiating a new lease for a term of three years. This instrument, approved by the Governor and Council May 3, 1933, reserves for the use of shipping 180 feet of the northerly platform of the wooden shed, and fixes the rental of the Lamport Manufacturing Supply Company, Inc., at \$5,500 per year for the term of the lease.

On July 5, 1933, a contract was made with the J. S. Packard Dredging Company to dredge the north and south docks and their approaches at the New Bedford State Pier: the north dock and approach to a depth of 30 feet at mean low water with a bottom width of 57 feet; the outer portion of the south dock and approach to a depth of 25 feet at mean low water with a bottom width of 40 feet; the inner portion of the south dock to a depth of 20 feet at mean low water with a bottom width of 40 feet. The contract prices for this work are: for dredging and disposing of the dredged material 48 cents per cubic yard, scow measurement; for removing and disposing of boulders \$20 per cubic yard. Because of the high unit costs of this work the funds available limited the project to the dredging of the northerly dock and of the approaches to both docks. Work was completed Oct. 2, 1933, at a contract cost of \$6,999.96.

Proposals for new doors, steel sash and repairs to plaster walls by the gunite process were received Nov. 28, 1933, and contract for the work awarded to the National Gunite Contracting Company.

Minor repairs to the pier have been made as usual during the year.

Amount expended for operation, maintenance and improvement during the year, \$13,594.63.

Income during the year, \$19,248.84.

Total expenditure for operation, maintenance and improvement to Dec. 1, 1933, \$137,988.12.

OAK BLUFFS SEA WALLS

The work of repairs and additions to the timber bulkhead and jetties at the Highlands, carried on under letter contract of Nov. 28, 1932, with Arthur K. Finney, was completed Jan. 17, 1933, at a contract cost of \$2,348.57. Toward this cost a contribution of \$1,500 was made by the town.

Under contract of Nov. 29, 1932, with the Merritt-Chapman and Scott Corporation for the removal of a broken section of the concrete sea wall southerly of the entrance to Lake Anthony, for the building of a new section, and for the placing of riprap, work was completed Jan. 16, 1933, at a contract cost of \$2,259.65.

On Sept. 5, 1933, a contract was made with the Pasquale Construction Co., Inc., for the construction of about 145 linear feet of concrete footing along the toe of the existing concrete sea wall north of the Steamboat Wharf at a contract price of \$23 per cubic yard for each cubic yard of concrete measured in place in the completed work.

Additional work was authorized later under this contract to pro-

vide for the placing of a concrete footing under another section of wall undermined by the storms in September. The entire work was completed Oct. 11, 1933, at a contract cost of \$1,340.21.

A contract was made on Sept. 19, 1933, with Joseph W. Nickerson to place stone riprap to protect the southerly shore of Lake Anthony adjacent to the highway at a contract price of \$2.98 for each ton of stone riprap furnished in place in the completed work. This project was completed Oct. 24, 1933, at a contract cost of \$909.82. Toward this cost a contribution of \$500 was made by the town.

An examination during the year of the section of shore near the bathhouse southerly of the steamboat wharf, revealed so much damage to sea walls in this location that the highway is in danger of being undermined if the erosion continues. The town appropriated \$6,000 as a contribution toward the cost of building a sea wall and spur jetties, but has been unable to secure the releases necessary from the Vineyard Grove Company, owner of adjacent property. Under these circumstances no protective work has been undertaken at this shore.

Amount expended during the year, \$8,426.24. Total expenditure to Dec. 1, 1933, \$238,511.08.

ORLEANS SHORE

A contract was made on June 27, 1933, with J. W. Nickerson for placing stone riprap to protect the shore adjacent to the highway bordering Pleasant Bay in the town of Orleans, at a contract price of \$2.98 for each ton of stone riprap furnished in place in the completed work, including all excavation, back filling and incidental work. The work was completed July 28, 1933, at a contract cost of \$1,747.41. This cost was paid from funds available for highway maintenance.

Amount expended during the year, \$1,861.03.

COMMONWEALTH PROPERTY AT PLYMOUTH

An appropriation of \$3,800 was made by the Legislature this year for the maintenance and repair of property at Plymouth acquired by the Pilgrim Tercentenary Commission and placed under the jurisdiction of the Department by vote of the Governor and Council on July 17, 1924.

The usual care of the grounds and of the pier and necessary minor repairs were carried on during the year.

Requests received from various steamship lines for the use of the pier for passenger service made it advisable to amend the rules and regulations adopted in 1927. The following amendment was approved by the Governor and Council on June 21, 1933:

"Said pier shall not be used for commercial purposes by any person or concern except by boats for the embarkation or landing of passengers."

Amount expended during the year, \$3,407.07. Total expenditure to Dec. 1, 1933, \$48,056.48.

PROVINCETOWN TERCENTENARY COMMISSION

During the year the land at Provincetown acquired by the Provincetown Tercentenary Commission and placed under the control of the Department June 23, 1926, has been cared for from funds appropriated for this area and the Province Lands. An employee of the Department has been kept at work during the summer to maintain the park in proper condition.

SCITUATE SEA WALLS

North Scituate

During the winter an inspection of the concrete sea wall at Surfside road found a section about 100 feet long undermined to a depth of 2 feet, and one of the spur jetties practically destroyed. A letter contract

was made under date of Feb. 14, 1933, with Frank H. Barry for the necessary repairs. The work was completed May 19, 1933, at a contract cost of \$2,540.91.

Work Under Special Legislation

By Chapter 286 of the Acts of 1933 the Department is authorized to expend not more than \$75,000 to build extension to certain sea walls and to repair existing sea walls and other shore protection in the town of Scituate. The Act stipulates that no work shall begin until the Town has voted to accept the provisions of the statute, assumed liability for damages and paid into the Treasury of the Commonwealth \$18,750, nor until the County Commissioners of Plymouth County have voted to accept the provisions of the Act and said County has paid \$18,750 into the State Treasury.

In August the Selectmen and County Commissioners filed with the Department certified copies of the required votes accepting the provisions of the Act. The Town also voted to assume all liability for damages. The contributions from the town and county made in accordance with the provisions of the statute were received in early September.

Under authority of this act work has been done covering the construction, extension and repair of sea walls in Scituate, and riprap protection of the shore, as follows:

Glades

On Oct. 4, 1933, a contract was made with Thomas Whalen and Sons, Inc., for the construction of about 250 linear feet of reinforced concrete cap and face to old concrete wall, the removal of about 128 feet of old concrete wall, and the placing of about 3,000 tons of stone riprap along the face of the concrete wall at the Glades, at the following contract prices: for furnishing material and constructing reinforced cap and face of wall, \$10 for each cubic yard of reinforced concrete measured in the completed work; for furnishing the stone riprap and depositing it in place along the concrete wall, \$1.65 for each ton of stone riprap furnished and in place in the completed work; for removing and disposing of about 128 linear feet of old concrete wall, the lump sum of \$150. This work was completed Nov. 24, 1933, at a contract cost of \$8,824.58.

Sand Hills and Cedar Point

An examination made in November of the sea walls at the Sand Hills found repairs needed to the wall originally built by the County and to the sea wall at Cedar Point damaged by action of the shingle on the beach. The repairs necessary for restoring these walls have been authorized, but no work has yet begun.

Shore Acres

On Sept. 5, 1933, a contract was made with Henry N. Worthington to furnish and place about 4,200 tons of heavy stone riprap and about 800 tons of stone chips to protect approximately 700 linear feet of bank at Shore Acres, at a contract price of \$1.38 for each ton of heavy stone riprap and chips furnished and placed in the completed work. Work under this contract was completed Nov. 11, 1933 at a contract cost of \$4,697.52.

A contract was made on Sept. 5, 1933, with A. K. Finney for the construction of about 930 linear feet of concrete sea wall, and the placing of about 1,100 tons of heavy stone riprap in front of the wall at Shore Acres, at the following contract prices: for furnishing material and constructing the concrete sea wall \$7.82 for each cubic yard of concrete measured in the completed work; for furnishing and placing heavy stone riprap for apron \$1.92 for each ton in the completed work. Under this contract, work is now in progress.

On Sept. 5, 1933, proposals were received for building a concrete sea wall and riprap apron along the shore in front of Oceanside Drive from a point northerly of Fourth Avenue to Eleventh Avenue. Protests from various owners of property were received against the building of the wall for a distance of about 600 feet easterly from Eleventh Avenue. The objections were carried to the point of the filing of a suit of equity in this matter.

Thomas H. Hannaford to whom the contract was awarded agreed to accept its terms and to build the shorter structure excluding the portion of the wall under controversy. On Sept. 12, 1933, a contract was made with Thomas H. Hannaford for the construction of about 2750 linear feet of concrete sea wall, seven concrete jetties, and furnishing and placing about 3,300 tons of heavy stone riprap in front of the wall, extending from the Sand Hills to Shore Acres, at the following contract prices: for furnishing material and building the concrete sea wall and jetties, \$7.79 for each cubic yard of concrete measured in the completed work; for furnishing and placing heavy stone riprap for apron, \$2.243 for each ton in the completed work. This work is now in progress.

Later in the season the property owners reached some compromise in the matter and asked the Department to build the remaining section of sea wall in accordance with the original specifications. No further action has been taken by the Department.

Third Cliff

A contract was made on Sept. 5, 1933, with Raymond A. Bergesson to place about 1,500 tons of stone riprap along the shore at Third Cliff, at a contract price of \$1.90 for each ton of riprap or stone chips furnished and placed in the completed work. This work is now in progress.

Amount expended in Scituate during the year for shore protection, \$45,532.14. Total expenditure to Dec. 1, 1933, for shore protection in Scituate, \$450,998.99.

TAUNTON RIVER

No work has been done by the Department this year upon the project to be carried out under the provisions of Chapter 405 of the Acts of 1930, by the dredging of a turning basin in Taunton River at Weir Village at the terminus of the channel to be dredged by the Federal Government to a depth of 12 feet at mean low water in the river.

As the Federal Government has not yet completed the channel, it was considered inadvisable to excavate the turning basin. It is expected that the channel will be finished during the coming year so that the Department can proceed to dredge the basin.

No expenditure during the year. Total expenditure to Dec. 1, 1933, \$31,561.95.

WARRENS COVE, PLYMOUTH

The damage done by heavy storms to the sea wall built by the Commonwealth in 1916 and 1917 near the Hotel Pilgrim has resulted in partially destroying the structure and in exposing the bank to severe erosion. The need for repairs and for the placing of riprap has been urgent for some years.

During the storm of Jan. 27-28 the bank back of the Hotel was further eroded and three walls built by owners of property between the two sections of the wall constructed by the Commonwealth, were completely destroyed. Requests were received from the town and from the property owners for adequate protection for this shore.

Repairs to existing walls, the building of concrete spur jetties and new walls, and the placing of riprap are provided for under the following contracts.

A contract was made on Apr. 25, 1933, with Tocci Bros. for building about 265 linear feet of concrete sea wall and five concrete jetties at Warrens Cove, Plymouth, at the following contract prices; for furnishing material and constructing the sea wall, \$8.50 for each cubic yard of concrete measured in the completed work; for furnishing materials and constructing five concrete jetties, \$8.50 for each cubic yard of concrete measured in the completed work. These structures were completed June 3, 1933, at a contract cost of \$5,170.94. Toward this cost contributions amounting to \$3,000 were made by the owners of property benefiting by the protection afforded by the work.

On May 16, 1933, a contract was made with Arthur K. Finney to furnish and place about 4,200 tons of stone riprap and chips for shore protection, to make repairs to an existing concrete sea wall and to build two concrete jetties, at the following contract prices: for each ton of stone riprap or chips in place in the completed work, \$1.82; for each cubic yard of concrete in place in concrete wall, jetties or footings, \$8. Toward the cost of this project a contribution of \$2,500 has been made by the town. The work is now in progress.

Amount expended during the year, \$8,949.51. Total expenditure to Dec. 1, 1933, \$34,241.86.

WEST CHOP, TISBURY

The work of building stone jetties under contract of Aug. 16, 1932, with Joseph W. Nickerson, was completed Dec. 7, 1932, at a contract cost of \$4,175.48.

The low price secured by the Department for furnishing and placing stone riprap and granite chips in the work allowed the extension of the protection by the building of two additional stone jetties westerly of those originally proposed. The five jetties have been of much benefit in checking erosion, but have been somewhat damaged by the winter storms. The protective work needs to be extended farther to the west and repairs should be made to the present jetties.

Amount expended during the year, \$1,394.32. Total expenditure to Dec. 1, 1933, \$5,116.07.

WINTHROP BREAKWATER

By Chapter 256 of the Acts of 1932 the Department is authorized for the purpose of protecting Winthrop Shore Drive and other shore property in Winthrop, to construct a breakwater about 1,000 feet easterly of the shore or in such other location as it may deem advisable, at an expenditure of not more than \$150,000. The statute provides that no work shall be begun until the Town has contributed and paid into the State Treasury the sum of \$25,000.

The contribution required from the Town was received in May, 1933, and on June 27, 1933, a contract was made with the Merritt-Chapman & Scott Corporation for building a stone breakwater in Broad Sound off Winthrop Shore Drive in the town of Winthrop at a contract price of \$2.22 for each ton of stone riprap furnished in place in the completed work. Under this contract work was completed Nov. 30, 1933, at a contract cost of \$146,521.33.

Three sections of stone breakwater, about 1,000 feet easterly from the shore, have now been built, the two northerly sections to a length of about 300 feet each, and the southerly one to a length of about 240 feet. Gaps about 100 feet wide at the mean high water line have been left between these sections in the expectation that the effectiveness of the structures will not be diminished while the cost has been lessened. If it seems advisable later, these gaps can be filled by building connecting structures.

The present breakwater provides for less than one-half the length

of shore needing protection. It is hoped that funds will be made available during the coming year to extend the structure.

Amount expended during the year, \$11,279.49. Total expenditure to Dec. 1, 1933, \$208,861.53.

WITCHMERE HARBOR, HARWICH

A contract was made Apr. 25, 1933, with the Saybrook Dredging Company for dredging the entrance channel to Witchmere Harbor to a depth of 6 feet at mean low water and a width of 40 feet on the bottom with increased width at the harbor end, at a contract price of 56 cents per cubic yard measured in place for dredging and disposing of the excavated material on marsh and flats by the hydraulic process, including the construction of necessary dikes and sluices.

While this dredging was going on the contractor offered to extend the channel through the two outer shoals in Nantucket Sound at an additional price of \$1,000. This offer was accepted by the Department. The entire project was completed June 29, 1933, at a contract cost of \$5,888.79. Toward this cost a contribution of \$2,500 has been made by the town of Harwich.

Amount expended during the year, \$6,391.54. Total expenditure to Dec. 1, 1933, \$69,942.75.

Miscellaneous

GREAT PONDS

Jurisdiction over great ponds belonging to the Commonwealth was conferred upon the Board of Harbor and Land Commissioners by chapter 318, Acts of 1888. This act applies to ponds containing in their natural state ten or more acres of land. Authority to sell and convey or lease, subject to the approval of the Governor and Council, any of the islands owned by the State in great ponds was later given by chapter 379, Acts of 1904, now section 2, chapter 91, General Laws.

During the year the Department has considered matters relating to: Blackmore's Pond, Wareham; Cedar Pond, Carver; Grass Pond, Harwich; Great Pond, Otis; Lake Quinsigamond, Worcester and Shrewsbury; Lake Tashmoo, Tisbury; Lake Winthrop, Holliston; Lead Mine Pond or Quassac Lake, Sturbridge; Long Pond, Harwich; Mill Ponds, Brewster; Nippinickett Pond, Bridgewater; Nutting Pond, Billerica; Oldham Pond, Hanson; Run Pond, Barnstable; Silver Lake, Pittsfield; Silver Lake, Wilmington; Snipatuit Pond, Rochester; South Pond, Barnstable; Whalom Lake, Lunenburg.

Surveys were made this year of the following great ponds:

Blackmore Pond, Wareham

Area at time of survey	45.36 A.
This pond may be drawn to an area of under license No. 832 approved by the Department of Public Works Sept. 28, 1927.	42.00 A.
Maximum depth	23.7 ft.

Cliff Pond, Brewster

Area at time of survey	201.19 A.
Maximum depth	94 ft.

Fawn Pond, Plymouth

Area at time of survey	46.63 A.
Area of natural pond	38.21 A.
Maximum depth	16.5 ft.

(Area at time of survey reported in 1932)

Flax Pond, Brewster

Area at time of survey	51.44 A.
Maximum depth	75 ft.

Long Pond, Rochester

Area at time of survey	33.84 A.
Depth note determined	

Lower Mill Pond, Brewster

Area at time of survey	52.07 A.
Area Natural Pond	37.99 A.
Maximum depth	13.0 ft.

Musquashiat Pond, Scituate

Area at time of survey	73.99 A.
Maximum depth	3.9 ft.

The height of water in this pond is affected to some extent by tide water and the water is brackish.

Snipatuit Pond, Rochester

Area at time of survey	704.9 A.
Pond contains three islands.	
Gull Island Area	0.33 A.
Low Bush Island Area	0.85 A.
High Bush Island Area	0.62 A.
These areas are not included in pond area.	
Depth not determined.	

Upper Mill Pond, Brewster

Area at time of survey	254.67 A.
Area natural pond	254.67 A.
Maximum depth	34.4 ft.

Amount expended during the year, \$3,696.37. Total expenditure to Dec. 1, 1933, \$29,029.71.

ACCESS TO GREAT PONDS

During the year one petition relative to access to a great pond has been heard under the provisions of Chapter 453 of the Acts of 1923.

On Dec. 14, 1932, public hearing was held before the Joint Board upon a petition of ten citizens of the Commonwealth for the establishment of a right of way to Jordan Pond in Shrewsbury and Worcester. At this hearing the petitioners, at the request of their attorney, were granted leave to withdraw.

By Chapter 180 of the Acts of 1933, the County Commissioners of Berkshire County were authorized to lay out a right of way in the town of Sandisfield to Lake Marguerite, also known as Simon pond, in said town for public access to said Lake, in accordance with plans approved by the Department of Public Works. Plans submitted by the County Commissioners were approved by the Department under date of Nov. 24, 1933.

PROVINCE LANDS

The territory belonging to the Commonwealth known as the Province Lands at Provincetown comprises about 3,810 acres lying northerly and westerly of a line described in chapter 470, Acts of 1893. By the terms of this act the Board of Harbor and Land Commissioners was given general care and supervision of this area.

Reclamation work under the direction of a superintendent has been carried on since 1894. To check the movement of the sand, the barren

dunes are first covered with brush or planted with beach grass. The grass is pulled in bunches about two inches thick and transplanted in rows about 4 feet apart and 6 inches deep. The transplanted grass lives between three and four years. This work is followed and reinforced by the transplanting of trees and shrubs.

During the year work on these lands has been continued in accordance with these methods. Sand dunes have been covered with brush; 30,000 native pines on the sod transplanted, and 150,000 seedling of Scotch and Austrian pines and 50 truck loads of bayberry planted.

Minor repairs have been made in replacing sod and in filling at the dike at Race Run.

The sum of \$101.05 has been paid into the State Treasury during the year from licenses issued for cultivating and picking cranberries on the bogs and for mowing meadows and from permits for occupying areas on these lands.

Amount expended during the year, \$4,700. Total expenditure to Dec. 1, 1933, \$166,634.58.

STATE BOUNDARY LINES

During the year about one and one half miles of the Massachusetts New Hampshire State line was relocated and two new monuments set in concrete.

TOWN BOUNDARY LINES

During the year several town boundary atlases were corrected and sold but no field work was done.

CONSERVING AND EQUALIZING THE FLOW OF WATER IN RIVERS AND STREAMS

By Chapter 359, Acts of 1909, chapter 564, Acts of 1912, and chapter 84, Resolves of 1917, co-operation was established between the Commonwealth and the Water Resources Branch of the United States Geological Survey, so that results of work relating to the gauging of streams within the Commonwealth and other work of a similar character carried on by the said survey have been obtained for use by the Department and are available for other Departments of the Commonwealth. Toward the cost of this work the Department has paid during the year, \$4,000.

During the year several of the stream gauging stations were rebuilt and improved, but the cost of this work was paid from Federal Funds.

RE-ESTABLISHMENT OF CERTAIN TRIANGULATION STATIONS

By section 33, chapter 91, General Laws, the Department is authorized to make such surveys and to do such other work as may be required by any order of the Land Court, to re-establish and permanently mark certain triangulation points and stations previously established in connection with the topographical survey of the Commonwealth, and the town boundary survey, which have been lost or destroyed and to obtain the geographical position of such new points and stations as may be required from time to time by the Court.

During the year the locations of the following triangulation stations were determined and permanently marked on the ground and the geographical positions furnished to the Land Court: 20 stations in Barnstable; 5 stations in Plymouth; 4 stations in Nantucket.

LICENSES AND PERMITS

During the year 99 licenses were granted for work to be done in tide water, great ponds, Connecticut River and Merrimack River and 108 permits for miscellaneous purposes. The Department also approved 106 permits granted by cities and towns for the construction and maintenance of fish weirs in tide waters.

EXPENDITURES FOR DEVELOPMENT AND IMPROVEMENT IN BOSTON HARBOR, 1859 — 1933, INCLUSIVE			
<i>Payments</i>	<i>To Nov. 30, 1932</i>	<i>1933</i>	<i>Total</i>
Boston Harbor	\$1,615,209 17 ¹		
Maintenance of Property		\$883.37	
Dredging and filling		30,969 69	
Special appropriations		71,760 01	\$1,718,822 24
Commonwealth Flats, East Boston	3,093,326 83 ²	—	3,093,326 83
Commonwealth Flats, South Boston	4,892,123 69	—	4,892,123 69
Castle Island	742,204 91		
Dredging and filling		981.50	
Maintenance of Property		578.50	743,764 91
Commonwealth Pier No. 5, South Boston:			
Construction	4,014,790 45	—	4,014,790 45
Maintenance	687,511 36	36,955 11	724,466 47
Dredging	22,050 36	3,607 04	25,657 40
Operation and Supervision	1,657,942 31	101,319 54	1,759,261 85
Commonwealth Pier No. 1, East Boston:			
Construction	1,199,703 23	—	1,199,703 23
Operation and Supervision	120,247 69	6,731 57	126,979 26
Maintenance	19,917 15	1,467 97	21,385.12
Commonwealth Pier No. 6, South Boston:			
Construction	1,092,149 06	—	1,092,149 06
Maintenance	51,937 90	—	51,937 90
Dry Dock	3,169,651 15 ³	—	3,169,651 15
Hayward Creek	385,979 61 ⁴	—	385,979 61
Mystic River	429,632 95 ⁵	770.60	430,403 55
Malden River	32,804 54 ⁶	198.30	33,002 84
Chelsea Creek	60,561 88	295 15	60,857 03
Commercial Point, Dorchester Bay	53,213 10	—	53,213 10
Maintenance of Property (in addition to maintenance items listed above)	364,144 80	11,913 52	376,058 32
	<u>\$23,705,102 14</u>	<u>\$268,431 87</u>	<u>\$23,973,534 01</u>

¹ Contribution by Quincy Market Cold Storage and Warehouse Corporation in 1921 . . . \$4,000 00
By Bethlehem Ship Building Corporation in 1930 . . . 10,000 00

² Appropriated by City of Boston in 1926 . . . 10,000 00

³ Additional amount paid by State Treasurer from Development of the Port of Boston Loan Sinking Fund in settlement of claims . . . 17,877 73

⁴ Contributions by Massachusetts Oil Refining Company and Bethlehem Ship Building Corporation . . . 38,600 00
Paid by State Treasurer for land taking . . . 3,725 27

⁵ Contribution by Merrimac Chemical Company . . .
in 1920 . . . 15,000 00
in 1922 . . . 4,182 50

Contribution by Beacon Oil Company in 1920 . . . 50,000 00

⁶ Expended by United States Government . . . 31,000 00

Contribution by Standard Oil Company of New York in 1922 . . . 600 00

EXPENDITURES AND CONTRIBUTIONS FOR IMPROVEMENT OF SMALL HARBORS
AND CHANNELS WITHIN BOSTON HARBOR, UNDER THE DIRECTION
OF THE DEPARTMENT OF PUBLIC WORKS AND ITS PREDECESSORS,
FROM 1893 TO 1933, INCLUSIVE

<i>Locality and Character of Work</i>	Contributions by	
	Municipality or Others	Total Expenditure
Cottage Park Channel, Winthrop, dredging	\$6,250.00	\$37,967 29
Dorchester, easterly shore, dredging and vey	1,000 00	210,767.61
Harbor View, dredging		146 00
Hingham Harbor, dredging	6,500 00	41,595 12
Houghs Neck, Quincy, dredging	7,500 00	46,088 31
Island End River, Everett, survey		264 10
Jeffries Point Channel, dredging		4,563 93
Mystic River (near Lawrence and Wiggin Wharf) dredging		5,927 70
Neponset River, dredging	10,000 00	109,401 63
Old Harbor Cove, dredging		10,520 48
Orient Heights Channel, dredging		45,412 38
Pemberton Point, Hull, breakwater	60,000 00	90,520 98
Pleasant Park Yacht Club Channel, dredging	3,000 00	16,241 49
Point Allerton, Hull, sea wall	50,000 00	75,127 05
Point Shirley, Winthrop		3,713 37
Quincy Bay, dredging	10,150 00	84,162 47
Shirley Gut, Boston and Winthrop, dredging		2,110 96
South Boston, Southerly Shore, dredging		129,542 08
Stony Beach, Hull, sea wall		12,556 58
Town River, Quincy, survey and dredging	16,050 00	57,663 25
Weir River, Hull, dredging	45,000 00	205,336 48
Wessagusset Channel, dredging		815 20
Weymouth Fore River, dredging	8,250 00	70,084 69
Winthrop Harbor Channels, dredging	17,192 00	73,984 22
	<hr/>	<hr/>
	\$240,892 00	\$1,334,513 37

EXPENDITURES AND CONTRIBUTIONS FOR RIVER AND HARBOR WORK
FROM DECEMBER 1, 1932 TO NOVEMBER 30, 1933

<i>Location and Character of Work</i>	Contributions	Expenditures
Allens Harbor, Harwich, jetty repairs	\$6,500 00	\$12,438 63
Bass River, Dennis and Yarmouth, survey	—	31.60
Brant Rock, Marshfield, sea walls and riprap	—	14,692.35
Cape Cod Canal Pier, Bourne, construction	—	87,469 35
Cape Cod Canal Pier, Bourne, operation and maintenance	—	2,135 46
Cape Poge, Edgartown, survey	—	215 00
Connecticut River, Hadley, dike construc- tion	2,000 00	3,214 09
Connecticut River, Hatfield, survey	—	72 91
Conservation of Waters	—	4,000 00
Cotuit Harbor, Cotuit, survey	—	260 97
Cuttyhunk Harbor, Gosnold, dredging and jetty repairs	1,000 00	12,846 93
Dennisport, stone jetty	600 00	884 95
East Bay, Osterville and Barnstable, sur- vey	—	45 52

<i>Location and Character of Work</i>	<i>Contributions</i>	<i>Expenditures</i>
Ellisville Harbor, Plymouth, jetty repairs	—	499 40
Falmouth Inner Harbor, dredging entrance channel	2,000 00	3,883 37
Geological Survey Trust Fund	480 00	2,709 90
Gloucester Harbor, Gloucester, survey	—	16 08
Great Ponds, survey	—	3,696 37
Green Harbor, Marshfield, stone riprap	—	1,769 01
Harwich Beach, shore protection	4,000 00	197 18
Herring River, Harwich, dredging and filling	300 00	2,690 61
Herring River, Wellfleet, dike	—	4,811 12
Hull, sea walls, concrete jetties and sea wall repairs	—	2,670 29
Hyannis Harbor, Barnstable, bulkhead and dredging	—	29,246 94
Improvement of Rivers and Harbors, general expenses	—	7,573 62
Ipswich River, Ipswich, survey	—	1,007 52
Lagoon Pond, Tisbury and Oak Bluffs, dredging and jetty	—	9,379 86
Lake Anthony, Oak Bluffs, stone riprap	500 00	850 23
Lewis Bay, Barnstable, survey	—	69.60
Long Beach, Rockport, riprap and sea wall repairs	1,700 00	4,790 25
Manchester Harbor, Manchester, survey	—	131 29
Marshfield-Duxbury, survey	—	358 61
Nahant, riprap	15,000 00	2,296 28
Namequoit River and Pleasant Bay, Chatham, riprap	—	1,861 03
New Bedford State Pier, operation and maintenance	—	5,420 89
New Bedford State Pier, construction and alterations	—	8,173 74
Nobscusset Harbor, Dennis, stone jetties	1,200 00	433 72
Oak Bluffs, bulkhead and sea wall repairs	1,500 00	7,576 01
Onset Bay, Wareham, survey	—	257 11
Plymouth Memorial Park, maintenance	—	3,407 07
Province Lands, Provincetown, reclamation	—	4,700 00
Sagamore Beach, Bourne, survey	—	78 85
Salisbury Beach, survey	—	1,690 05
Scituate, shore protection	37,500 00	
First and Second Cliffs, riprap	—	79 35
General surveys, Scituate	—	160 49
Glades, Scituate, sea wall	—	8,013 46
Humarock Beach, survey	—	38 23
North Scituate, Surfside, sea wall repairs	—	3,313 42
Sand Hills, concrete ramp	—	239 07
Sand Hills to Shore Acres, sea wall and jetties	—	17,626 47
Shore Acres, Scituate, wall and riprap	—	12,913 13
Third Cliff, Scituate, riprap	—	6,991 94
Sengekontacket Pond, Oak Bluffs, survey	—	104 28
Shirley Gut, survey	—	104 01
Singing Beach, Manchester, survey	—	81 80
Stage Harbor, Chatham, survey	—	136 52
Truro Beach, head of Pamet River, survey	—	71 74
Waquoit Bay, Falmouth and Mashpee, bulkhead and jetties	—	365 13

<i>Location and Character of Work</i>	Contributions	Expenditures
Warrens Cove, Plymouth, riprap, jetties and sea walls	5,500 00	8,949 51
Water Conservation—see Conservation of Waters		
West Bay, Barnstable and Osterville, survey	—	89 95
West Chop, Tisbury, stone jetties	—	1,394 32
West Dennis Beach, stone jetty	750 00	55 85
West Harwich Beach, Harwich, stone jetty	—	873 41
Winthrop Shore, Winthrop, stone breakwater	25,000 00	111,279 49
Witchmere Harbor, Harwich, dredging entrance channel	2,500 00	6,391 54
	<hr/> \$108,030 00	<hr/> \$429,826 87

EXPENDITURES AND CONTRIBUTIONS FROM 1893 TO 1933, INCLUSIVE, FOR RIVER AND HARBOR WORK, UNDER THE DIRECTION OF THE DEPARTMENT OF PUBLIC WORKS AND ITS PREDECESSORS (EXCEPTING BOSTON HARBOR)

<i>Location and Character of Work</i>	Contributions by Municipality or Others	Total Expenditure
Acushnet River, inspection and dredging	—	\$119,810 10
Allens Harbor, Harwich, shore protection, dredging, riprap and jetties	\$18,927 50	51,146 43
Allens Pond, Dartmouth, survey	—	195 95
Angle Tree Monument, reservation	—	1,306 22
Annisquam River, Gloucester, dredging, removing ledges and riprap	13,250 00	171,498 69
Apponagansett Harbor and River, Dartmouth, survey, dredging and stone breakwater	—	55,786 05
Barnstable Harbor, Barnstable, dredging	7,500 00	30,693 16
Bass River, Beverly, dredging	55,535 75	81,075 56
Bass River, Dennis and Yarmouth, jetties, dredging and survey	22,595 00	182,445 07
Beach Street, Scituate — See Scituate.		
Beverly Harbor, Beverly, dredging	—	50,000 00 ¹
Brant Rock, Marshfield, shore protection	111,503 66	229,665 64
Brewster, Skaket Inlet, survey	—	617 19
Bucks Creek, Chatham, jetties, survey and dredging	2,500 00	39,719 69
Buzzards Bay, Falmouth, survey	—	166 11
Cape Cod Canal Pier, Bourne, construction	—	258,362 67
Cape Cod Canal Pier, Bourne, operation and maintenance	—	2,135 46
Cape Poge, Edgartown, cut through beach, jetties and riprap	16,500 00	42,905 09
Cataumet Harbor — See Megansett Harbor.		
Cedar Point, Scituate — See Scituate.		
Centerville River, Barnstable, dredging	19,711 50	44,329 77
Chatham, riprap and surveys	10,500 00	19,813 19
Cohasset Harbor, Cohasset, breakwater and dredging	42,691 88	116,191 93
Concord River, Billerica, removing boulders	150 00	1,664 59

¹ Expended by United States Government.

<i>Location and Character of Work</i>	Contributions by		Total Expenditure
	Municipality or Others		
Connecticut River, investigation of navigation and surveys	—		8,878 96
Connecticut River, Agawam, protective work	—		18,814 42
Connecticut River, Chicopee, survey, wall and riprap	640 00		25,789 02
Connecticut River, Hadley, diversion wall and riprap	7,000 00		121,955 04 ²
Connecticut River, Hatfield, dikes and riprap	1,000 00		51,311 52
Connecticut River, Holyoke, dredging and protective work	1,991 29		9,253 27
Connecticut River, Holyoke, marking and lighting old piers	—		1,195 32
Connecticut River, Northampton, riprap	—		1,524 20
Connecticut River, Northfield, riprap	—		9,028 90
Connecticut River, South Hadley, wall	1,000 00		7,379 58
Connecticut River, Springfield and West Springfield, protective work	—		12,510 08 ³
Conservation of Waters, investigation	—		84,764 54
Cotuit Harbor, Barnstable, dredging, survey and bulkhead repairs	13,183 38		83,504 82
Cuttyhunk Harbor, Gosnold, jetties and dredging	10,000 00		83,935 78
Deacons Pond Harbor — See Falmouth Inner Harbor			
Dennisport, stone jetty	600 00		884 95
Duxbury Bay and Harbor, dredging	27,000 00		92,653 35
East Bay, Osterville, jetties, dredging and removing scows	10,000 00		70,969 75
Edgartown Harbor, Edgartown, survey and cut in beach	300 00		3,496 64
Ellisville Harbor, Plymouth, dredging and jetty repairs	—		20,673 58
Essex County Beaches, survey	—		1,000 00
Essex River, Essex, dredging	—		76,304 33 ⁴
Fall River Harbor, improvement	—		1,130 18
Falmouth Heights, Falmouth, sea wall and riprap	22,210 04		70,667 71
Falmouth Inner Harbor, dredging, jetties, wall and riprap	33,500 00		154,279 63
Falmouth, Menauhant Shore, bulkheads, jetties and riprap	3,100 00		6,075 33
First and Second Cliffs, Scituate — see Scituate			
Fresh Water Cove, Gloucester, dredging	3,300 00		17,477 53
Gay Head, survey	—		555 42
Geological Survey Trust Fund	3,000 00		3,000 00
Glades, North Scituate — See Scituate.			
Gloucester Fish Pier	—		396 91
Gloucester, Western Avenue, sea wall	35,000 00		60,000 00
Gloucester Harbor, Gloucester, dredging and removing ledges	15,000 00		148,802 79

² From 1888 inclusive.³ From 1891 inclusive.⁴ \$5,000 expended by United States Government.

<i>Location and Character of Work</i>	Contributions by Municipality or Others	Total Expenditure
Great Head, Winthrop — See Winthrop Shore		
Great Ponds, survey	—	29,029 71
Green Harbor, Marshfield, jetties, dredging and survey	42,500 00	167,238 38
Gun Rock Point, Hull, breakwater and sea wall repairs	16,135 41	77,939 33
Harbor Cove, Gloucester, survey and dredging	3,866 00	25,155 04
Harwich Beach, Harwich, shore protection	4,000 00	197 18
Harwich Shore, near Chatham Line, stone jetty	350 00	1,206 75
Herring Creek, Scituate, survey	—	253 76
Herring River, Harwich, jetties, dredging and riprap	36,400 00	134,720 58
Herring River, Wellfleet, dikes and ditches	10,000 00	39,320 50
Hoosac River, North Adams, excavation and survey	—	21,271 67
Housatonic River, Sheffield, survey	—	2,011 29
Hull, sea wall and jetties	8,882 06	42,093 96
Humarock Beach, Scituate — See Scituate.		
Hyannis Harbor, bulkhead and dredging	21,750 00	40,494 50
Hyannisport, Barnstable, survey and breakwater	2,500 00	65,017 76
Improvement of Rivers and Harbors, general expenses	—	55,494 21
Ipswich River, Ipswich, jetty, wall, riprap and dredging	3,800 00	60,087 07
Kings Beach, Swampscott, removal of obstruction	—	166 41
Lagoon Pond, Tisbury and Oak Bluffs, dredging and jetty	13,500 00	25,855 90
Lake Anthony, Oak Bluffs, jetties and dredging	16,000 00	98,261 74
Lake Quannapowitt, Wakefield, investigation	—	345 32
Lake Tashmoo, Tisbury, survey	—	432 88
Lewis Bay, Barnstable, survey and dredging	18,809 29	66,874 33
Little Harbor, Cohasset, survey	500 00	1,476 77
Little Harbor, Marblehead, dredging	2,500 00	11,166 16
Little River, Gloucester, survey	—	862 93
Lobster Cove, Gloucester, dredging	4,500 00	61,603 36
Long Beach, Rockport, sea wall	27,700 00	57,306 56
Lynn Harbor, Lynn, anchorage basin, survey and dredging	5,200 00	121,609 22
Lynn Harbor and Saugus River, dredging and filling	37,500 00	165,527 54
Manchester Harbor, Manchester, survey, jetties and dredging	83,000 00	189,838 88
Marshfield-Duxbury, survey	—	358 61
Mattapoisett Harbor, survey	—	255 48
Megansett Harbor, Bourne and Falmouth, dredging	12,730 00	52,116 66
Menamsha Inlet, Chilmark and Gay Head, jetties, dredging, sea wall and riprap	2,700 00	130,243 43
Merrimack River, investigation	—	1,208 50

<i>Location and Character of Work</i>	Contributions by	
	Municipality or Others	Total Expenditure
Mill River, Gloucester, survey and dredging	300 00	24,899 59
Mitchells River, Chatham, survey and dredging	6,000 00	23,113 92
Monument Beach, Bourne, survey	—	326 40
Nahant, survey and riprap	15,000 00	2,378 43
Namequoit River and Pleasant Bay, dredging	5,500 00	30,390 65
Nantucket, survey of Sesachacha Pond	—	110 66
Nantucket Harbor, dredging	5,000 00	58,982 52
Nauset Harbor and Town Cove, Orleans, dredging	2,000 00	10,671 24
New Bedford Harbor, dredging	—	18,856 57
New Bedford State Pier, pier shed and dredging	13,446 74 ^s	558,593 16
New Bedford State Pier, operation and maintenance	—	73,528 29
Newburyport Harbor, survey	—	115 97
Nobscussett Harbor, Dennis, breakwater, dredging, riprap and jetties	3,150 00	41,818 94
North River, Marshfield, survey and removing rocks	1,800 00	8,658 75
North River, Salem, survey	—	704 52
North Scituate — See Scituate.		
Oak Bluffs, removing rocks	—	594 95
Oak Bluffs, sea walls, bulkhead and jetties	54,000 00	148,675 58
Ocean Grove, Swansea, survey	—	143 23
Onset Bay, Wareham, survey and dredging	1,000 00	15,553 00
Orleans, survey	—	104 18
Palmers Pond, Falmouth, survey	—	358 76
Pamet River, Truro, survey, dredging and repairing jetties	1,200 00	198,010 32
Paskamansett River, Dartmouth, dredging and jetty	—	5,227 68
Penikese Island, Gosnold, pile wharf and survey	—	5,192 95
Pines River, Revere and Saugus, survey	—	904 80
Pleasant Bay, Chatham, dredging	600 00	2,364 33
Plum Island River, Newbury and Newburyport, survey	—	983 31
Plymouth Harbor, dredging and removing old piling	92,794 55 ^a	324,565 02
Plymouth Memorial Park, maintenance	—	48,056 48
Point Shirley, Winthrop — See Winthrop Shore		
Poponessett Bay, Barnstable and Mashpee, dredging	—	46,252 33
Powow River, Amesbury, dredging channel and riprapping wall	—	502 94
Province Lands, Provincetown, reclamation	—	166,634 58
Provincetown Harbor, shore protection	75 00	28,730 81
Quamquisset Harbor, Falmouth, survey	—	710 31
Quansett Harbor, Orleans, survey and dredging	500 00	2,194 50
Red Brook Harbor, Bourne, removing pier	—	275 00
Revere, stone breakwater	—	60,397 93

^s Paid by Surety Company^a \$57,000 expended under direction of United States Government.

<i>Location and Character of Work</i>	Contributions by Municipality or Others	Total Expenditure
Rock Harbor, Orleans, dredging	2,400 00	20,832 51
Rockport Harbor, Rockport, dredging and removing rocks	4,750 00	32,897 46
Sagamore Beach, Bourne	—	78 85
Salem Harbor, Salem, survey	—	1,509 92
Salisbury Beach, survey	—	4,754 27
Salt Pond River, Eastham, survey	—	210 11
Salters Point, Dartmouth, breakwater	4,500 00	42,939 57
Sand Hills Scituate — See Scituate.		
Sandwich Harbor, Sandwich, dredging channel, riprap and jetties	—	80,579 84
Saugus River, Lynn and Saugus, survey and dredging	2,000 00	20,845 17
Scituate, shore protection	75,000 00	
Beach Street, Scituate, wall and break- water	17,333 52	34,782 50
Cedar Point, Scituate, wall and break- water	21,446 64	41,298 70
First and Second Cliffs, Scituate, wall and riprap	2,797 92	19,553 12
Glades, North Scituate, filling and rip- rap	13,250 78	38,751 42
Humarock Beach, Scituate, survey, wall and jetties	37,816 38	83,583 74
North Scituate, Surfside, sea wall, jet- ties and riprap	2,194 68	33,144 84
Sand Hills, Scituate, wall and jetties	4,511 26	34,031 13
Third Cliff, Scituate, riprap and survey	75,193 10	134,770 21
General surveys at Scituate	—	543 73
Shore Acres, Scituate, riprap	—	12,913 13
Sand Hills to Shore Acres, Scituate, sea wall, jetties and riprap	—	17,626 47
Scituate Harbor, dredging and surveys	53,300 00	206,011 94
Scorton Harbor, Sandwich, jetty and dredg- ing	500 00	17,774 34
Seapuit River, Barnstable, dredging	13,000 00	25,088 55
Sengekontacket Pond, Oak Bluffs, survey	—	104 28
Sesuit Harbor, Dennis, jetty	1,500 00	24,555 10
Shirley Gut, survey	—	201 06
Singing Beach, Manchester, survey	—	81 80
Sippican Harbor, Marion, survey	—	615 66
Smiths Cove, Gloucester, survey and dredging	3,875 00	13,466 16
South Harwich, stone jetties and riprap	2,500 00	3,701 31
South River, Marshfield and Scituate, sur- vey	—	724 85
South River, Salem, dredging	3,000 00	13,462 66
South Watuppa Pond, Fall River, fenders and excavation	—	203 42
Stage Harbor, Chatham, dikes and survey	—	11,792 15
Steam Gauging — See Conservation of Waters		
Swampscott, survey	—	103 46
Taunton-Brockton, waterway investigation	—	5,278 18
Taunton River, survey and dredging	42,500 00	31,561 95

<i>Location and Character of Work</i>	Contributions by Municipality or Others	Total Expenditure
Taunton River-Boston Harbor Canal, survey	—	9,932 75
Taunton River-Massachusetts Bay Canal, survey	—	11,786 71
Truro Beach, survey	—	71 74
Vineyard Haven Harbor, Tisbury, breakwater and dredging	1,000 00	45,518 25
Vineyard Haven Harbor, repairing sea wall	2,380 50	11,945 01
Waquoit Bay, Falmouth, breakwater, wall, bulkhead and dredging	17,500 00	98,438 91
Wareham River, Wareham, survey and dredging	5,000 00	42,567 93
Warrens Cove, Plymouth, sea wall and survey	15,213 98	34,241 86
Watch Hill, Chatham, survey and riprap	—	14,968 75
Water Conservation — See Conservation of Water		
Wellfleet Harbor, Wellfleet, survey and dredging	1,500 00	17,600 29
West Bay, Barnstable and Osterville, dredging, jetties and riprap	16,128 07	114,607 52
West Chop, Tisbury, stone jetties	2,500 00	5,116 07
West Dennis Beach, stone jetty	750 00	55 85
West Falmouth Harbor, Falmouth, surveys, dredging and breakwater	11,473 75	63,520 95
West Harwich Beach, Harwich, shore protection	6,000 00	26,717 00
Western Avenue sea wall, Gloucester — see under Gloucester		
Westfield River, Westfield, survey and jetties	—	6,037 29
Westport Harbor, Westport, jetty extension and repairs	—	21,928 88
Wild Harbor, Falmouth — jetty and dredging	15,000 00	55,128 66
Winthrop Shore, Winthrop, sea walls and protective work	65,500 00	208,861 53
Witchmere Harbor, Harwich, jetties and dredging	6,000 00	69,942 75
Woods Hole, Great Harbor, Falmouth, dredging	1,500 00	6,968 86
Wrecks, removal from tide water	—	20,283 69
Yarmouthport Harbor, survey	7,000 00	95,977 37
	<hr/> \$1,644,194 63	<hr/> \$8,396,959 26

FEDERAL APPROPRIATIONS AND EXPENDITURES

Federal appropriations and expenditures for improvement of rivers and harbors in Massachusetts from the establishment of the government to the close of the fiscal year ending June 30, 1933, are shown in the following tables furnished by the Chief of Engineers, U. S. Army:—

TABLE NO. 1. — *Localities at Present Under Improvement*

(Compiled from the Annual report of the Chief of Engineers, U. S. Army, for the fiscal year ending June 30, 1933)

<i>Locality</i>	<i>Expenditures</i>	<i>Appropriations</i>
Newburyport Harbor	\$506,298 13	\$506,748 13
Gloucester Harbor	545,575 63	545,575 63
Lynn Harbor	782,017 25	790,775 89
Boston Harbor	13,594,731 57	13,765,265 10
Plymouth Harbor	421,184 80	421,184 80***
Cape Cod Canal	12,466,263 56	12,851,195 56
Operating and Care, Cape Cod Canal	1,286,217 78	1,300,755 28
Pollock Rip Shoals	1,367,037 25	1,318,074 66
Cross Rip Shoals, Nantucket Sound	34,822 14	41,967 20
New Bedford and Fairhaven Harbor	1,327,418 91	1,337,848 53
Fall River Harbor	778,626 35	819,282 69
Taunton River	323,484 50	429,775 86
Total	\$33,433,677 87	\$34,128,449 33

***Exclusive of \$108,400 contributed funds.

TABLE NO. 2. — *Localities in Which Work is Not Now in Progress*

(Compiled from data furnished by the United States Treasury Department and the Chief of Engineers, U. S. Army)

<i>Locality</i>	<i>Expenditures</i>	<i>Appropriations</i>
Merrimack River	\$404,466 72	\$404,466 72
Malden River	149,950 00	149,950 00****
Sandy Bay, Cape Ann, Harbor of Refuge	1,941,478 00	1,941,478 00
Bass River	20,150 34	20,150 41
Buzzards Bay Harbor	2,500 00	2,500 00
Canapitset Channel	5,312 54	9,800 00
Chatham Harbor	12,171 36	13,732 79
Cohasset Harbor	10,000 00	10,000 00
Duxbury Harbor	37,000 00	37,000 00
East Dennis Breakwater	7 57	1,500 00
Edgartown Harbor	25,000 00	25,000 00
Essex River	30,000 00	30,000 00
Hingham Harbor	38,316 58	38,316 58
Hyannis Harbor	221,267 07	221,267 07
Ipswich River	5,617 91	5,617 91
Kingston Harbor	8,940 09	10,000 00
Little Harbor, Woods Hole	18,000 00	18,000 00
Manchester Harbor	23,985 57	23,985 57
Marblehead Harbor	833 42	1,900 00
Martha's Vineyard (Edgartown Harbor)	30,000 00	30,000 00
Powow River	50,940 72	51,000 00
Rockport Harbor	91,229 25	91,229 25
Town River	37,577 41	37,557 41
Vineyard Haven Harbor	55,387 35	55,387 35
Wareham Harbor	95,997 30	96,236 00
Wellfleet Harbor	11,365 57	16,000 00
Westport Harbor and River	3,000 00	3,000 00
Winthrop Harbor	9,000 00	9,000 00
Woods Hole Channel	343,599 92	344,000 00

****Exclusive of \$ 62,000 contributed funds.

<i>Locality</i>	<i>Expenditures</i>	<i>Appropriations</i>
Beverly Harbor	246,690 41	246,690 41*
Salem Harbor	107,956 57	107,956 57
Mystic River	306,684 84	306,684 84
Dorchester Bay and Neponset River .	128,176 44	128,176 44
Weymouth Fore River	641,150 00	641,150 00**
Weymouth Back River	27,000 00	27,000 00
Scituate Harbor	126,590 98	126,590 98
Provincetown Harbor	348,062 72	348,062 72
Harbor of Refuge at Nantucket . .	694,582 83	694,582 83
Total	\$6,309,989 48	\$6,324,989 85

*Exclusive of \$100,000 contributed funds

**Exclusive of \$100,000 contributed funds

RECAPITULATION

	<i>Expenditures</i>	<i>Appropriations</i>
Total of Table No. 1	\$33,433,677 87	\$34,128,449 33
Total of Table No. 2	6,309,989 48	6,324,989 85
	\$39,743,667 35	\$40,453,439 18

EXPENDITURES ON BOSTON HARBOR AND ITS TRIBUTARIES TO JUNE 30, 1933
(The tributaries given are those now under improvement and do not include tributaries heretofore improved.)

<i>Locality</i>	<i>Expenditures</i>	<i>Appropriations</i>
Boston Harbor proper*	\$13,480,743 04	\$13,527,362 58

* Including Chelsea Creek.

CONTRACTS MADE BY THE DEPARTMENT OF PUBLIC WORKS

CON-TRACT No.	Work	Contractor	Date
269	Lagoon Pond—Oak Bluffs and Tisbury, — dredging and jetty.	Merritt-Chapman & Scott Corporation.	Aug. 23, 1932
312	Cape Cod Canal, Bourne, — construction landing pier and dredging.	Merritt-Chapman & Scott Corporation	Apr. 26, 1932
325	Hyannis Harbor, Lewis Bay, Barnstable, — timber bulkhead.	Thomas Whalen & Sons, Inc. . .	June 28, 1932
330	Hyannis Harbor, Lewis Bay, Barnstable, — dredging.	Saybrook Dredging Company . .	Aug. 9, 1932
332	West Chop, Tisbury, — shore protection by stone jetties.	Joseph W. Nickerson . . .	Aug. 16, 1932
335	Brant Rock, Marshfield sea wall . . .	A. Piatelli & Company. . .	Sept. 27, 1932
340	Gun Rock-Green Hill, Hull, — sea wall repairs.	Thomas Whalen & Sons, Inc.	Oct. 25, 1932
341	Warrens Cove, Plymouth, — repairs to sea wall, riprap and jetties.	A. K. Finney	May 16, 1933
342	West Harwich Beach, — stone jetty. . .	Sidney W. Lawrence	Nov. 9, 1932
343	Oak Bluffs — repairs to concrete sea wall	Merritt-Chapman & Scott Corporation	Nov. 29, 1932
344	Green Harbor, Marshfield, — riprap. . .	Thomas Whalen & Sons, Inc. . .	Dec. 27, 1932
345	Herring River, Harwich, — filling at property of Charles E. LeBuff.	Arthur K. Finney	Feb. 7, 1933
346	Allens Harbor, Harwich, — repairing jetties.	Joseph W. Nickerson	Mar. 14, 1933
348	Pleasant Bay, Orleans shore. . . .	Joseph W. Nickerson	June 27, 1933
349	Long Beach, Rockport, — riprap. . .	Thomas Whalen & Sons, Inc. . .	Apr. 25, 1933
350	Boston Harbor, — removal of hulks. . .	Bay State Dredging & Contracting Company	Apr. 4, 1933
351	Boston Harbor, — removal of hulks..	Roy B. Rendle & Company, Inc. .	Apr. 18, 1933
352	Warren's Cove, Plymouth sea wall and jetties.	Tocci Bros.	Apr. 25, 1933
353	Boston Harbor, — removal of hulks..	The Rendle Corporation	Apr. 25, 1933
354	Cape Cod Canal Pier, — retaining wall, stairs, ramp, etc.	Pasquale Construction Company, Inc.	May 2, 1933

AND IN FORCE DURING THE YEAR ENDING NOV. 30, 1933

Condition of Work	Contract Prices	Amount paid during year ending Nov. 30 1933	Total paid to Nov. 30, 1933	Estimated amount of contract
Completed Dec. 21, 1932	For dredging and disposing of dredged material on marsh and flats by hydraulic process, including the construction of necessary dikes and sluices, 35 cents for each cubic yard measured in place. For removing and disposing of all boulders \$25. for each cubic yard. For each ton of riprap or stone chips furnished and placed in completed work, \$3.23.	\$ 8,983 78	\$ 24,101 16	\$ 23,770 00
Completed Mar. 25, 1933	Unit prices	59,349 05	215,450 95	200,618 00
Completed Dec. 10, 1932	For each linear foot of creosoted timber bulkhead constructed in place, \$11.90.	2,607 10	10,699 10	10,710 00
Completed May 13, 1933	For dredging and disposing of dredged material on marsh, flats and behind the bulkhead, by the hydraulic process, or other means, including the construction of necessary dikes, sluices and spillways and incidental work, \$.1889 for each cubic yard measured in place. For removing and disposing of all boulders, \$10. per cubic yard.	23,766 08	23,766 08	21,534 60
Completed Dec. 7, 1932	For furnishing and placing heavy stone riprap and granite chips in jetties, the sum of \$4.19 for each ton of 2000 pounds.	1,297 01	4,175 48	2,095 00
Completed Jan. 2, 1933	For furnishing material and constructing concrete sea wall, including all incidental work, \$6.65 for each cubic yard of concrete measured in place in the completed work.	5,012 09	8,643 15	6,650 00
Completed Dec. 29, 1932	For each cubic yard of concrete in place in the completed work, \$8.15.	1,095 22	1,095 22	896 50
In progress	For each ton of stone riprap or chips in place in completed work, \$1.82. For each cubic yard of concrete in place in concrete walls, jetties or footings, \$8.00.	2,351 44	2,351 44	8,044 00
Completed Dec. 17, 1932	For each ton of stone riprap furnished in place in the completed work \$3.12.	714 43	714 43	530 40
Completed Jan. 16, 1933	For furnishing material and constructing concrete sea wall, including excavation, backfill and all incidental work, \$13. for each cubic yard of concrete measured in place in completed work. For each ton of stone riprap furnished in place in completed work, \$3.75.	2,259 65	2,259 65	2,002 50
Completed Feb. 25, 1933	For each ton of stone riprap or chips furnished in place in the completed work, including all excavation, backfilling and incidental work, the sum of \$1.88.	1,341 43	1,341 43	1,128 00
Completed April 6, 1933	For furnishing and placing sand fill, including all incidental work, the lump sum of \$572.	572 00	572 00	572 00
Completed May 17, 1933	For each ton of riprap or stone chips furnished and placed in completed work, including all incidental work, \$3.19.	11,847 13	11,847 13	9,570 00
Completed July 28, 1933	For each ton of stone riprap furnished in place in completed work, including all excavation, back filling and incidental work, \$2.98.	1,747 41	1,747 41	1,490 00
Completed June 2, 1933	For each ton of riprap or stone chips furnished and placed in completed work, the sum of \$1.43.	3,134 74	3,134 74	2,860 00
Completed Apr. 17, 1933	For removal and disposal of hulks from Boston Harbor, Mystic River and Winthrop Harbor, as specified, the lump sum of \$2700.	2,700 00	2,700 00	2,700 00
Completed June 19, 1933	For removal and disposal of hulks as specified from property of Boston Port Development Co., Condor St., East Boston, the lump sum of \$3800. For pulling and disposing of piles as specified on property of Boston Port Development Co., Condor St., East Boston, the lump sum of \$600.	4,400 00	4,400 00	4,400 00
Completed June 3, 1933	For furnishing material and constructing concrete sea wall, including all excavation, backfilling, removing old walls and all incidental work, the sum of \$8.50 for each cubic yard of concrete measured in the completed work. For furnishing materials and constructing five concrete jetties, including all excavation, back filling and all incidental work, the sum of \$8.50 for each cubic yard of concrete measured in the completed jetties.	5,170 94	5,170 94	4,675 00
Completed July 12, 1933	For removal and disposal of hulks specified from Chelsea Creek, the lump sum of \$1800.	2,200 00	2,200 00	2,200 00
Completed June 29, 1933	Unit prices	1,737 75	1,737 75	1,663 25

CONTRACTS MADE BY THE DEPARTMENT OF PUBLIC WORKS

CONTRACT No.	Work	Contractor	Date
355	Witchmere Harbor, — Harwich — dredging	Saybrook Dredging Company.	Apr. 25, 1933
356	Brant Rock, Marshfield, — concrete sea wall.	Corsetti and Arcese Co..	June 6, 1933
357	Dolphin A on Bird Island Anchorage Basin	M. & R. Construction Company	June 13, 1933
358	Commonwealth Pier 5 — repairs to pile platform.	A. A. Hersey & Son Co.	June 6, 1933
359	New Bedford State Pier, — dredging docks and approaches.	J. S. Packard Dredging Company	July 5, 1933
360	Cape Cod Canal Pier, — moveable gangways.	Waghorne-Brown Company	June 6, 1933
361	Winthrop Breakwater.	Merritt-Chapman & Scott Corporation	June 27, 1933
362	Cape Cod Canal Pier, — building	Durso Construction Company	June 6, 1933
363	Wollaston Dredging.	Bay State Dredging & Contracting Company	June 6, 1933
364	Commonwealth Pier 5, — dredging east berth.	Bay State Dredging & Contracting Company	Sept. 26, 1933
365	Cuttyhunk Harbor, — Gosnold.	The Saybrook Dredging Company.	June 27, 1933
366	Cape Cod Canal Pier, — electric lighting	Mass. Electric Construction Co.	July 25, 1933
367	Chelsea Creek, East Boston, — removal of hulks.	John Forward	Aug. 1, 1933
368	Dennis, — stone jetty at Dennisport.	Sidney W. Lawrence	Aug. 15, 1933
369	Shore Acres, Scituate, — riprap protection.	Henry N. Worthington	Sept. 5, 1933
370	Glades Sea Wall, — Scituate.	Thomas Whalen & Sons, Inc.	Oct. 4, 1933

AND IN FORCE DURING THE YEAR ENDING NOV. 30, 1933

Condition of Work	Contract Prices	Amount paid during year ending Nov. 30 1933	Total paid to Nov. 30, 1933	Estimated amount of contract
Completed June 29, 1933	For dredging and disposing of excavated material on marsh and flats by the hydraulic process, including the construction of necessary dikes and sluices, 56 cents for each cubic yard measured in place.	5,888 79	5,888 79	4,888 80
Completed Aug. 30, 1933	For furnishing material and constructing concrete sea wall, \$7.32 per cubic yard of concrete measured in completed work.	6,523 10	6,523 10	5,916 72
	For furnishing material and constructing reinforced concrete footing, \$8. per cubic yard of reinforced concrete measured in completed work.			
	For furnishing material and constructing concrete cap, backing and steel dowels, \$8.60 for each cubic yard of reinforced concrete in the completed work.			
	For each cubic yard of filling material furnished, delivered and measured in place in the completed work, \$4.40 per cubic yard.	6,523 10	6,523 10	5,916 72
Completed July 26, 1933	For furnishing dolphin complete, including all incidental work, \$175.	175 00	175 00	175 00
In progress	Unit prices	3,034 40	3,034 40	2,195 00
Completed Oct. 2, 1933	For dredging and disposing of dredged material 48 cents per cubic yard, scow measurement.	6,999 96	6,999 96	9,620 00
	For removing and disposing of boulders \$20. per cubic yard.			
Completed Aug. 31, 1933	For furnishing and erecting in place at Cape Cod Canal Pier two gangways complete and ready to operate, including all incidental work, the lump sum of \$2645.	2,820 00	2,820 00	2,645 00
Completed Nov. 30, 1933	For each ton of stone riprap furnished in place in the completed work, including all incidental work, \$2.22.	109,446 00	109,446 00	111,000 00
In progress	For the construction of building complete, including foundations, floors, outside platforms, plumbing, drains, cistern with allowances as specified, and all incidental work, the lump sum of \$21,378.	18,536 99	18,536 99	21,378 00
	For the substitution of 4-inch tile backing in side walls in place of 8-inch tile, as specified deduct \$378.			
	For omission of all plumbing fixtures, water pump and tank and all plumbing above floor level, deduct \$700.			
	For omission of floor specified in main shed, deduct \$1,000.			
Completed July 11, 1933	For dredging channel and basin and disposing of dredged material, 38 cents per cubic yard, scow measurement.	11,893 62	11,893 62	11,790 00
	For removing and disposing of all boulders \$10. for each cubic yard.			
In progress	For dredging and disposing of dredged material, 43 cents per cubic yard, scow measurement.	3,483 95	3,483 95	13,780 00
	For removing and disposing of boulders, \$20. per cubic yard.			
Completed Sept. 9, 1933	For dredging and disposing of excavated material on shore by hydraulic process, including construction of all necessary dikes and sluices, 28.8 cents for each cubic yard measured in situ.	9,160 70	9,160 70	9,000 00
	For removing and disposing of all boulders, \$10. for each cubic yard.			
Completed Oct. 24, 1933	For furnishing and installing complete, electric service as specified, \$1239.	1,098 30	1,098 30	1,239 00
In progress	For removal and disposal of steel hulk "Yankton", \$500.	2,465 00	2,465 00	3,400 00
	For removal and disposal of all hulks, wrecks, etc., as specified except steel hulk "Yankton", \$2900.			
Completed Oct. 14, 1933	For furnishing and placing stone riprap and granite chips in the jetty, \$3.12 for each ton of 2000 pounds.	856 60	856 60	936 00
Completed Nov. 11, 1933	For each ton of heavy stone riprap and chips furnished in place in the completed work, \$1.38.	3,838 40	3,838 40	6,900 00
Completed Nov. 24, 1933	For furnishing material and constructing reinforced cap and face of wall, \$10. for each cubic yard of concrete measured in completed work.	7,500 89	7,500 89	6,900 00
	For furnishing stone riprap and depositing it in place along concrete wall, \$1.65 per ton furnished and in place in completed work.			
	For removing and disposing of about 128 feet of old concrete wall, the lump sum of \$150.			

CONTRACTS MADE BY THE DEPARTMENT OF PUBLIC WORKS

CON-TRACT No.	Work	Contractor	Date
371	Commonwealth Pier 5, — Boston, — removal of wall and erection of fence on observation platform.	Waghorne-Brown Co. . . .	Sept. 13, 1933
372	Commonwealth Pier 5, — Boston, — alterations to moveable gangway.	Waghorne-Brown Co. . . .	Sept. 13, 1933
373	Falmouth Inner Harbor, — dredging.	Bay State Dredging & Contracting Co.	Sept. 5, 1933
374	Oak Bluffs, — concrete footing under sea wall north of steamboat wharf.	Pasquale Construction Company, Inc.	Sept. 5, 1933
375	Boston Harbor, — removal of hulks westerly of harbor.	M. & R. Construction Company	Aug. 29, 1933
376	Shore Acres, Scituate, — sea wall of concrete, jetties and riprap.	Thomas H. Hannaford . . .	Sept. 12, 1933
377	Third Cliff, Scituate, — stone riprap.	Raymond A. Bergesson . . .	Sept. 5, 1933
378	Scituate, Shore Acres, — concrete sea wall and stone riprap.	A. K. Finney	Sept. 5, 1933
379	Lake Anthony, Oak Bluffs, stone riprap.	Joseph W. Nickerson	Sept. 19, 1933
380	Nobscusset Harbor, Dennis, — stone jetties westerly of harbor.	Sidney W. Lawrence	Sept. 19, 1933
381	Pleasant Park Channel, Winthrop, — dredging.	Bay State Dredging & Contracting Co.	Nov. 28, 1933
382	Boston Harbor, — dredging adjacent to Pier 1 of N.Y., N.H.&H.R.R. Co. . . .	Bay State Dredging & Contracting Co.	Sept. 26, 1933
383	Nahant Shore, Nahant, — riprap protection	M. McDonough Co.	Oct. 10, 1933
384	Commonwealth Pier 5, — painting exterior steel work.	Louis P. Steensen	Sept. 20, 1933
385	Mystic River, — dredging above Malden Bridge.	Bay State Dredging & Contracting Co.	Oct. 10, 1933
386	West Dennis Beach, — stone jetty. . . .	Sidney W. Lawrence	Nov. 28, 1933
387	Commonwealth Pier 5, — installation of steel sash, replacement of glass, and repairs to sash.	Maurice M. Devine	Nov. 23, 1933
390	East Boston Pier 1, — steel sliding cargo doors.	Waghorne-Brown Company . . .	Nov. 28, 1933
392	Commonwealth Pier 1, — East Boston, — repairs to platforms and shed.	Murray Engineering Company . .	Nov. 28, 1933
393	New Bedford State Pier, — repairs to plaster walls and doorways and new windows and doors.	National Gunite Contracting Co. .	Nov. 28, 1933

AND IN FORCE DURING THE YEAR ENDING NOV. 30, 1933

Condition of Work	Contract Prices	Amount paid during year ending Nov. 30 1933	Total paid to Nov. 30, 1933	Estimated amount of contract
Completed Nov. 10, 1933	Lump sum of \$322.	273.70	273 70	322 00
Completed Nov. 10, 1933	Lump sum of \$1044.	887 40	887 40	1044 00
Completed Oct. 4, 1933	For dredging entrance channel and disposing of dredged material 47 cents per cubic yard, scow measurement.	3,611 48	3,611 48	3,592 00
	For removing and disposing of boulders \$20. per cubic yard.			
Completed Oct. 11, 1933	For furnishing material and constructing concrete footing \$23. for each cubic yard of concrete measured in place in the completed work.	1,139 18	1,139 18	690 00
In progress	Lump sum of \$1495.	1,016 60	1,016 60	1,495 00
In progress	For furnishing material and constructing concrete sea wall and jetties, \$7.79 for each cubic yard of concrete measured in completed work.	16,633 35	16,633 35	31,940 40
	For furnishing and placing heavy stone riprap for apron \$2.243. for each ton in completed work.			
In progress	For each ton of riprap or stone chips furnished and placed in the completed work, \$1.90.	6,460 00	6 460 00	6,650 00
In progress	For furnishing material and constructing the concrete sea wall, including all excavation, backfilling forms and removing old bulkhead, including all incidental work the sum of \$7.82 for each cubic yard of concrete measured in the completed work.	8,069 46	8,069 46	14,936 80
	For furnishing and placing heavy stone riprap for apron including excavation, backfilling, chinking including all incidental work, the sum of \$1.92 for each ton of heavy stone riprap in the completed work.			
Completed Oct. 24, 1933	For each ton of stone riprap furnished in place in completed work, \$2.98.	773 35	773 35	894 00
In progress	For each ton of stone riprap furnished in place in completed work, \$3.10.			2,170 00
In progress	For dredging and disposing of dredged material 38 cents per cubic yard, scow measurement.			9,900 00
	For removing and disposing of boulders, \$20. per cubic yard.			
In progress	For dredging and disposing of dredged material 37 cents per cubic yard, scow measurement.	21,462 42	21,462 42	18,520 00
	For removing and disposing of boulders \$20. per cubic yard.			
In progress	For each ton of stone riprap furnished in place in the completed work, \$1.18.	1,995 97	1,995 97	16,520 00
In progress	For furnishing all labor, paint, materials and equipment and doing all cleaning and painting, the lump sum of \$1720.			1,720 00
In progress	For dredging area and disposing of dredged material, 41 cents per cubic yard, scow measurement.			9,860 00
	For removing and disposing of boulders \$20. per cubic yard.			
In progress	For furnishing and placing stone riprap and granite chips in the jetty \$3.10 per ton.			1,193 50
In progress	Unit prices			9,181 25
Not yet begun	For each steel sliding door furnished and erected, including all incidental work, \$143.37.			2,293 92
Not yet begun	Unit prices			1,440 00
Not yet begun	For removing existing plaster wall on north side of pier and replacing with gunite, the lump sum of \$1460.			2,625 00
	For placing new gunite surface on exposed face of elevator shaft, and on inner and outer corners of steel shed, the lump sum of \$615.			
	For furnishing and erecting two steel sash, the lump sum of \$50.			
	For furnishing and erecting 3 doors, complete and ready to operate, the sum of \$500.			

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